



SERVICE MANUAL 2120



marantz

model 2120

Am/Fm Stereophonic Tuner

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INTRODUCTION

This service manual was prepared for use by Authorized Warranty Stations and contains service information for Marantz Model 2120 AM/FM Stereophonic Tuner.

Servicing information and voltage data included in this manual are intended for use by the knowledgeable and experienced technician only. All instructions should be read carefully. No attempt should be made to proceed without a good understanding of the operations in the Tuner.

The parts list furnishes information by which replacement parts may be ordered from the Marantz Company. A simple description is included for parts which can usually be obtained through local suppliers.

1. P.W. BOARDS

As can be seen from the circuit diagram, the chassis of Model 2120 consists of the following units. Each unit mounted on a printed circuit board is described within the square enclosed by a bold dotted line on the circuit diagram.

1. FM Front End mounted on P.W. Board P100
2. AM Tuner, FM IF &
MPX Stereo Decoder mounted on P.W. Board P200
3. Antenna mounted on P.W. Board PC01
4. Dolby Socket mounted on P.W. Board PK01
5. Switch mounted on P.W. Board PS01
6. Function Indicator mounted on P.W. Board PY01
7. Dial Lamp mounted on P.W. Board PZ01

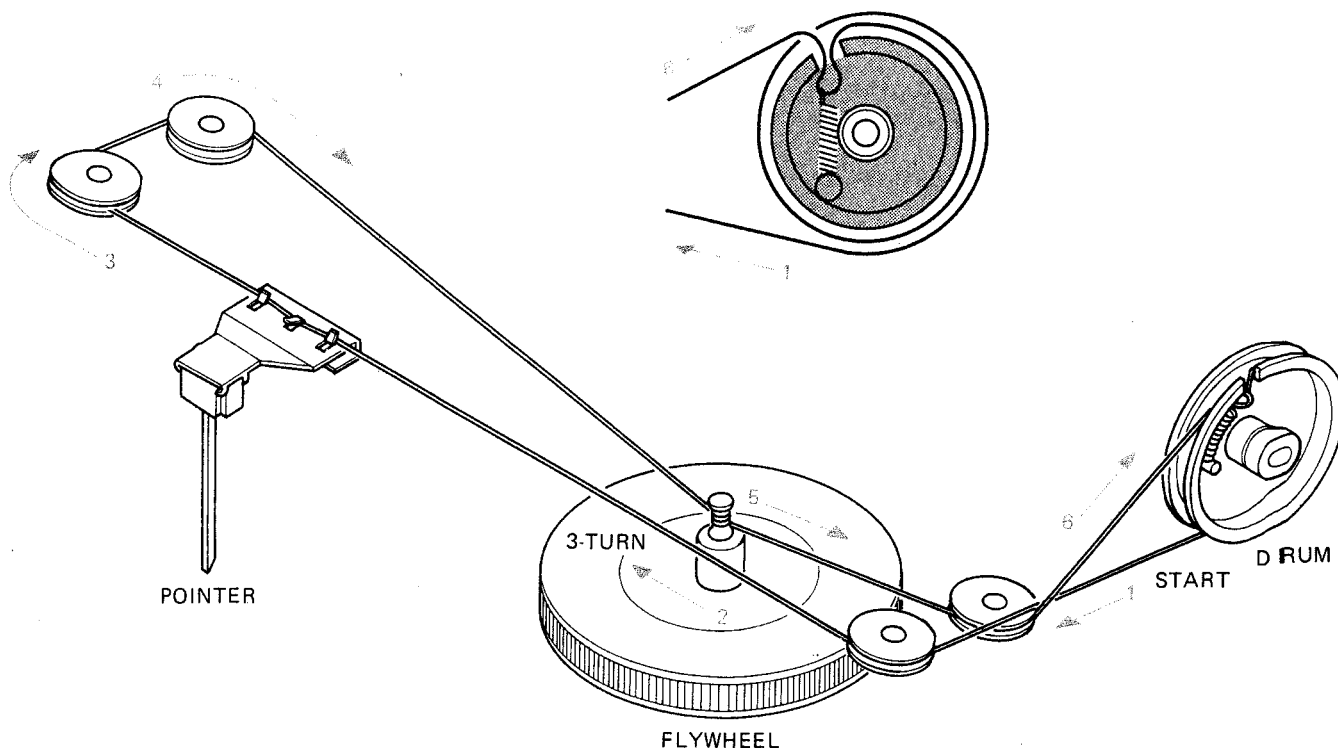


Figure 1. Dial Stringing

2. TEST EQUIPMENT REQUIRED FOR SERVICING

This table lists the test equipment required for servicing the Model 2120 Tuner.

Item	Manufacturer and Model No.	Use
AM Signal Generator		Signal source for AM alignment
Test Loop		Use with AM Signal Generator
FM Signal Generator MPX Signal Generator	Sound Technology Model 1000A	Signal source for FM alignment Stereo separation alignment and trouble shooting
Distortion Analyzer Audio Oscillator AC VTVM	Sound Technology Model 1700A	Distortion measurements Sinewave and squarewave signal source Voltage measurements (AC)
Oscilloscope	Tektronix Model T932 Philips Model 3232	Waveform analysis and trouble shooting
Frequency Counter	Fluke Model 1900A	MPX Oscillator adjustment (VCO)
Circuit Tester		Trouble shooting
DC VTVM	Fluke Model 8000 "Digital" Simpson Model 313, Triplet Model 801	Voltage measurements (DC)
AC Wattmeter	Simpson Model 1379	Monitors primary power to tuner
Line Voltmeter	Simpson Model 1359	Monitors potential of primary power to tuner
Variable Autotransformer	Superior Electronic Co., Powerstat Model 116B-10A	Adjusts level of primary power to tuner

3. AM ALIGNMENT PROCEDURES

3.1 AM IF ALIGNMENT

1. Connect a sweep generator to the L152 and an alignment scope to the J267 (T.P.).
2. Rotate each core of IF transformers L154 and L155 for maximum height and flat top symmetrical response.

3.2 AM FREQUENCY RANGE AND TRACKING ALIGNMENT

1. Set AM signal generator to 515 kHz. Turn the tuning capacitor fully closed (place the tuning pointer at the low end) and adjust the oscillator coil L153 for maximum audio output.
2. Set the signal generator to 1650 kHz. Place the tuning pointer in the high frequency and adjust the oscillator trimmer (C125) on the oscillator tuning capacitor for maximum audio output.
3. Repeat steps 1 and 2 until no further adjustment is necessary.
4. Set the generator to 600 kHz and tune the Tuner to the same frequency and adjust a slug core of AM ferrite-rod antenna L001 for maximum output.
5. Set the generator to 1400 kHz and tune the Tuner to the same frequency and adjust the trimming capacitor (C124) on the antenna tuning capacitor for maximum output.
6. Repeat steps 4 and 5 until no further adjustment is necessary.

NOTE: During tracking alignment reduce the signal generator output as necessary to avoid AGC action.

4. FM ALIGNMENT PROCEDURES

4.1 FM FREQUENCY RANGE AND TRACKING ALIGNMENT

1. Connect an FM signal generator to the FM ANTENNA terminals and an oscilloscope and an audio distortion analyzer to the Tuner OUTPUT jacks on the rear panel.
2. Set the signal generator to 87.4 MHz and provide about 3 to 5 μ V. Place the tuning pointer at the low frequency end by rotating the tuning knob and adjust the core of oscillator coil L107 to obtain maximum audio output.
3. Set the signal generator to 109 MHz and provide about 3 to 5 μ V output. Rotate the tuning knob and place the tuning pointer at the high frequency end and adjust the trimming capacitor C123 for maximum output.
4. Repeat steps 2 and 3 until no further adjustment is necessary.
5. Set the signal generator to 90 MHz and tune the Tuner to the same frequency. Decrease signal generator output until the audio output level decreases with the decreasing generator output. Adjust the pitch of antenna coil L101 and adjust the core of RF coils L102 and L103 for maximum output.
6. Set the signal generator to 106 MHz and tune the Tuner to the same frequency. Decrease the signal generator output until the audio output level decreases with the decreasing generator output. Adjust the trimming capacitors of antenna and RF tuning capacitors C120, C121 and C122 for maximum output.
7. Repeat steps 5 and 6 until no further adjustment is necessary.

8. Set the IF Bandwidth switch to wide (in) position. Adjust the primary core (lower) of discriminator transformer L202 so that the center tuning meter pointer indicates its center at no signal applied. Set the FM signal generator to 98 MHz and increase its output level 1 μV and tune the Tuner to the same frequency so that the center tuning meter pointer indicates its center. Adjust the secondary core (upper) of L202 for minimum distortion.
9. Set the IF Bandwidth switch to narrow (out) position. Adjust the trimming resistor R251 so that the center tuning meter pointer indicates its center at no signal applied.

4.2 STEREO SEPARATION AND DISTORTION ALIGNMENT

1. Set the FM signal generator to provide 1 μV at 98 MHz. Tune the Tuner to the same frequency so that the center tuning meter pointer indicates its center.
2. Turn off the modulation of the generator, connect a frequency counter to test point J209, and adjust R304 so that the frequency counter may precisely read 19 kHz.
3. Modulate the signal generator with stereo composite signal consisting only of L or R channel (of course a pilot signal must be included).
4. Set the IF Bandwidth switch to wide (in) position. Adjust the trimming capacitor C224 for minimum distortion.
5. Adjust the trimming resistor R323 for maximum and same separation in both channels.

6. Set the IF Bandwidth switch to narrow (out) position. Adjust the core of L105 for minimum distortion.
7. Adjust the trimming resistor R324 for maximum and same separation in both channels.

4.3 MUTING THRESHOLD ALIGNMENT

1. Set the FM signal generator output to provide 12.5 μV (IHF) at 98 MHz and tune the Tuner to the same frequency.
2. Adjust the trimming resistor R244 for the threshold level of 12.5 μV . (During this adjustment turn the MUTING pushswitch "on".)

4.4 FM OUTPUT LEVEL ADJUSTMENT

1. Set the FM signal generator to provide a 400 Hz, 50% modulated 98 MHz mono signal, at 1 μV output. Precisely tune the Tuner to 98 MHz.
2. Depress the FM 25 μS pushswitch, and adjust R326 and R350 until the outputs of both channels are 580 mV.

4.5 RECORD LEVEL TONE SWITCH ADJUSTMENT

Depress the REC LEVEL 400 Hz switch and adjust the trimming resistor RL05 for the 1160 mV output.

5. POWER SUPPLY ADJUSTMENT

Connect a VTVM between J217(+) and J213(-), and adjust R803 until the VTVM reads 14.0 V under no signal condition.

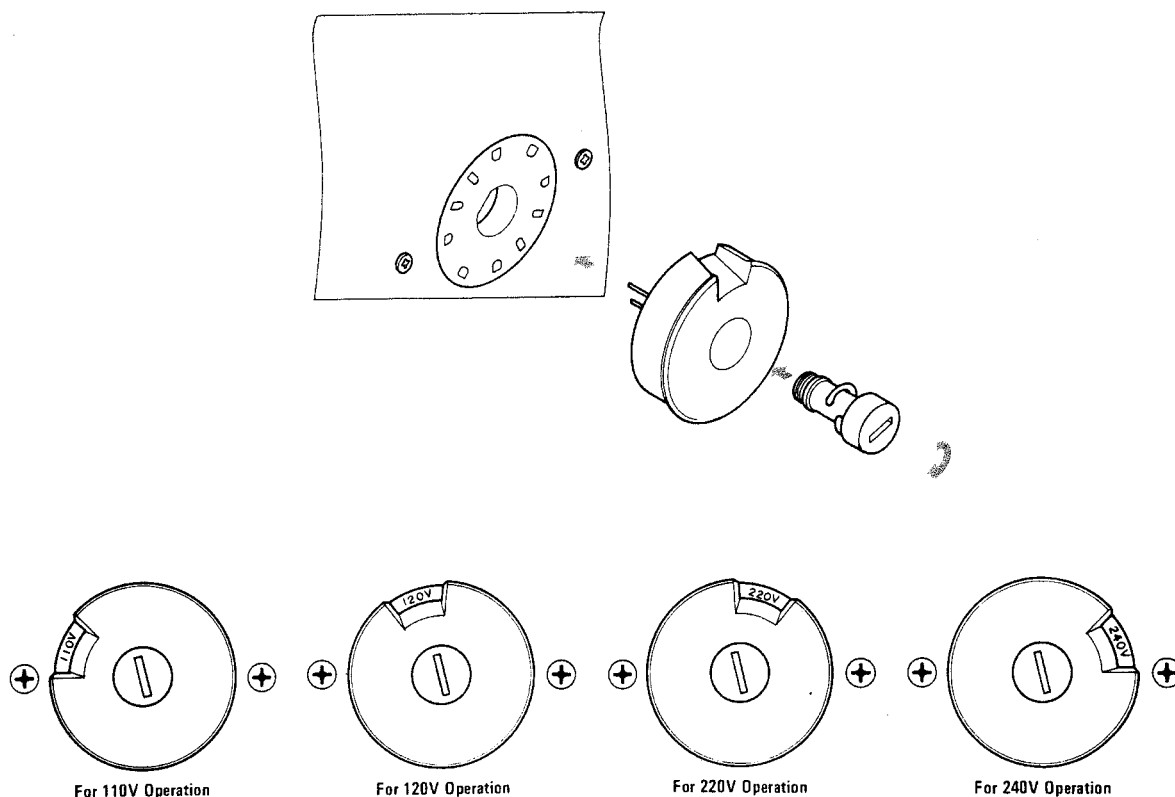


Figure 2. Voltage Conversion Chart

6. VOLTAGE CONVERSION FOR EUROPEAN MODEL

The European version of the Model 2120 is equipped with a universal power transformer that may be adjusted to operate at 110 V, 120 V, 220 V, or 240 V AC at 50 to 60 Hz. To convert the unit to a different power source voltage, reposition conversion plug as shown in Figure 2.

**CAUTION: DISCONNECT POWER SUPPLY CORD
FROM AC OUTLET BEFORE CONVERT-
ING VOLTAGE.**

FTZ REGULATION

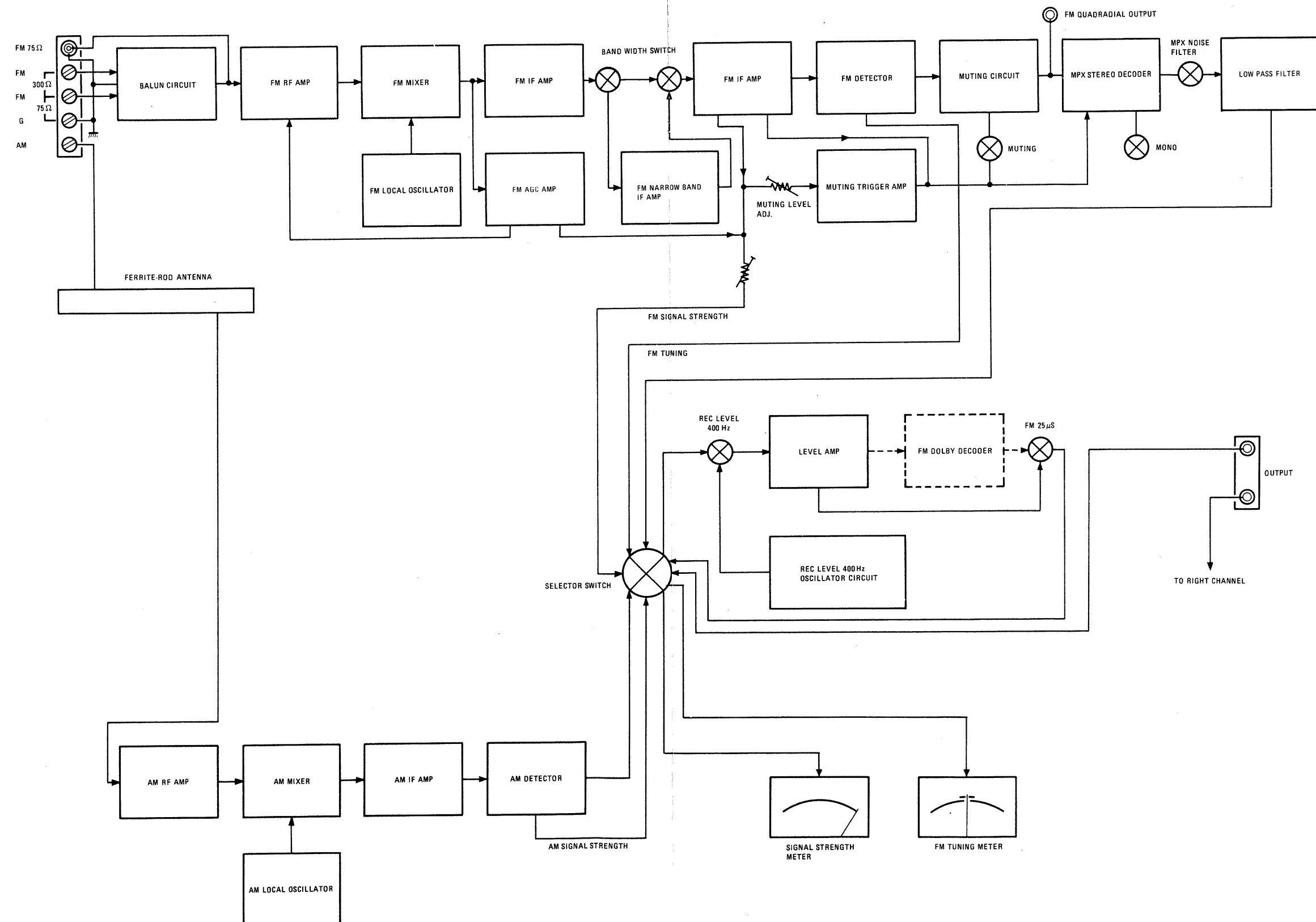
Instruction for the use in the range other than specified in FTZ codes.

Achtung für die Leute, die in dem Gebiet wohnen, wo die FTZ-Bestimmungen vorherrschend sind.

Sollte das Gerät auch für Frequenzen ausserhalb des in den FTZ-Bestimmungen angegebenen Bereiches empfangsbereit sein, bitten wir, den Bereich durch Nachstellen des Kernes in der Oszillatorschule (in der Abbildung mit "FTZ" gekennzeichnet) so zu korrigieren, dass er den Bestimmungen entspricht.

7. DIAGRAMS

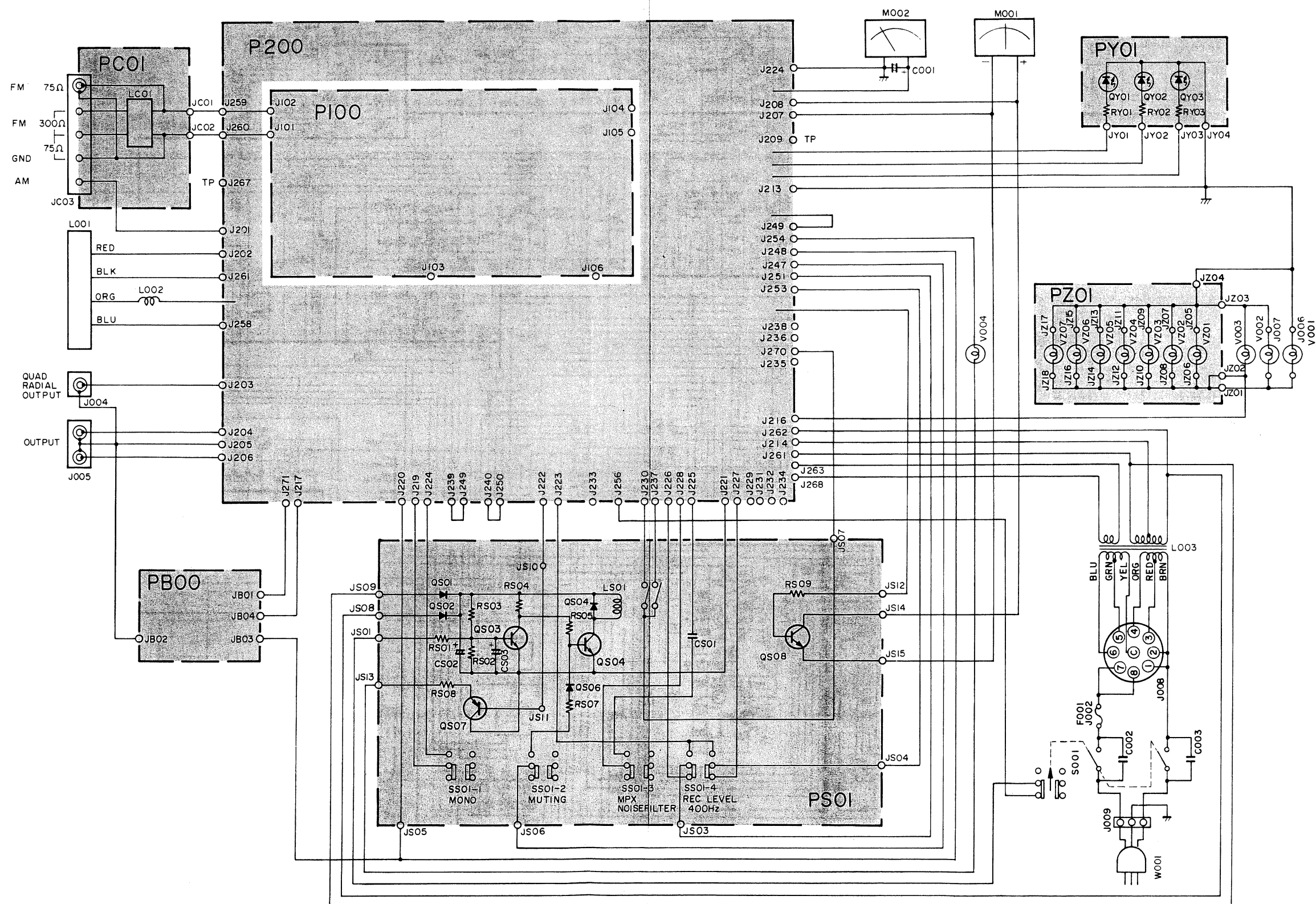
7.1 BLOCK DIAGRAM



7

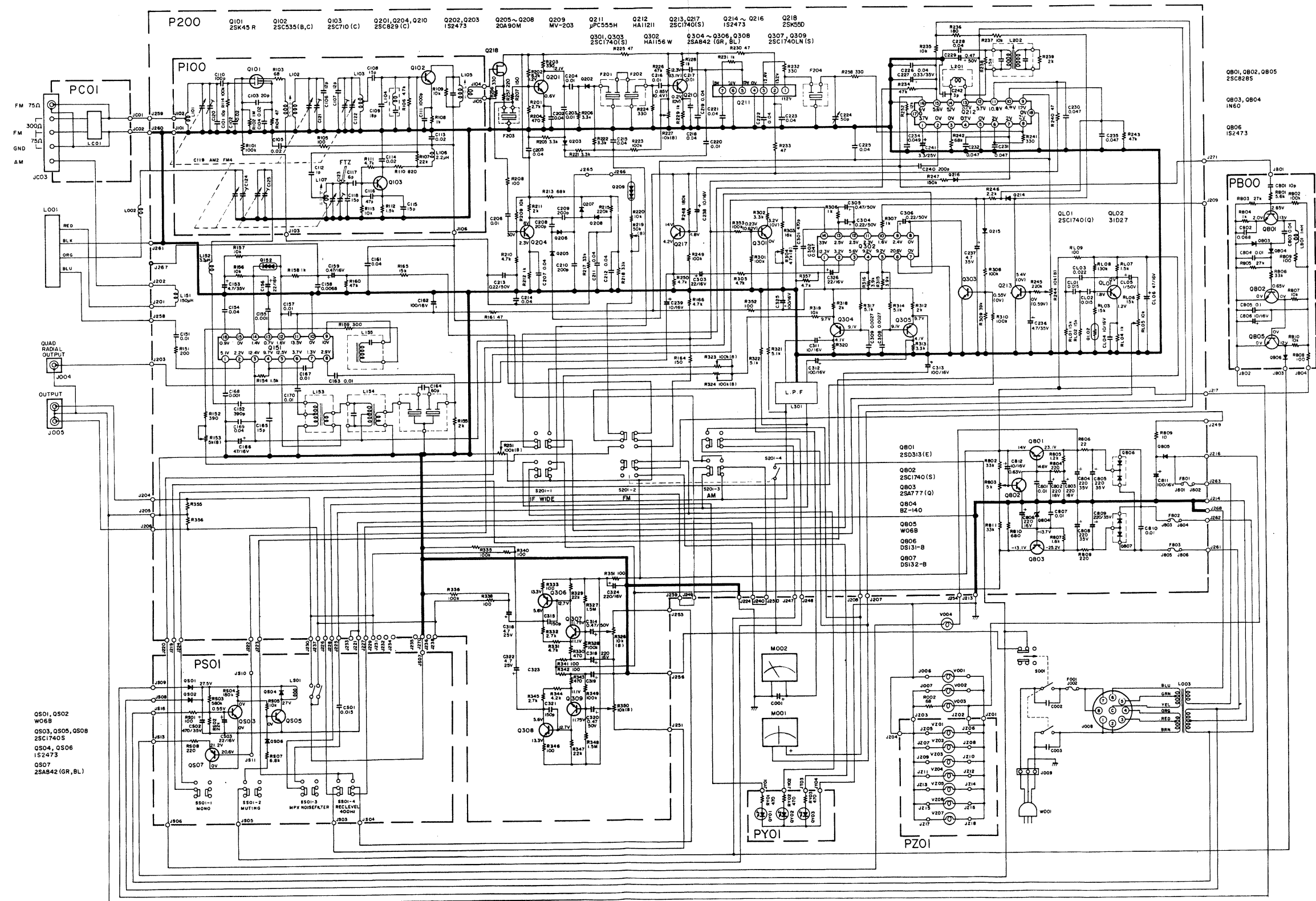


7.3 CONNECTION DIAGRAM - EUROPE

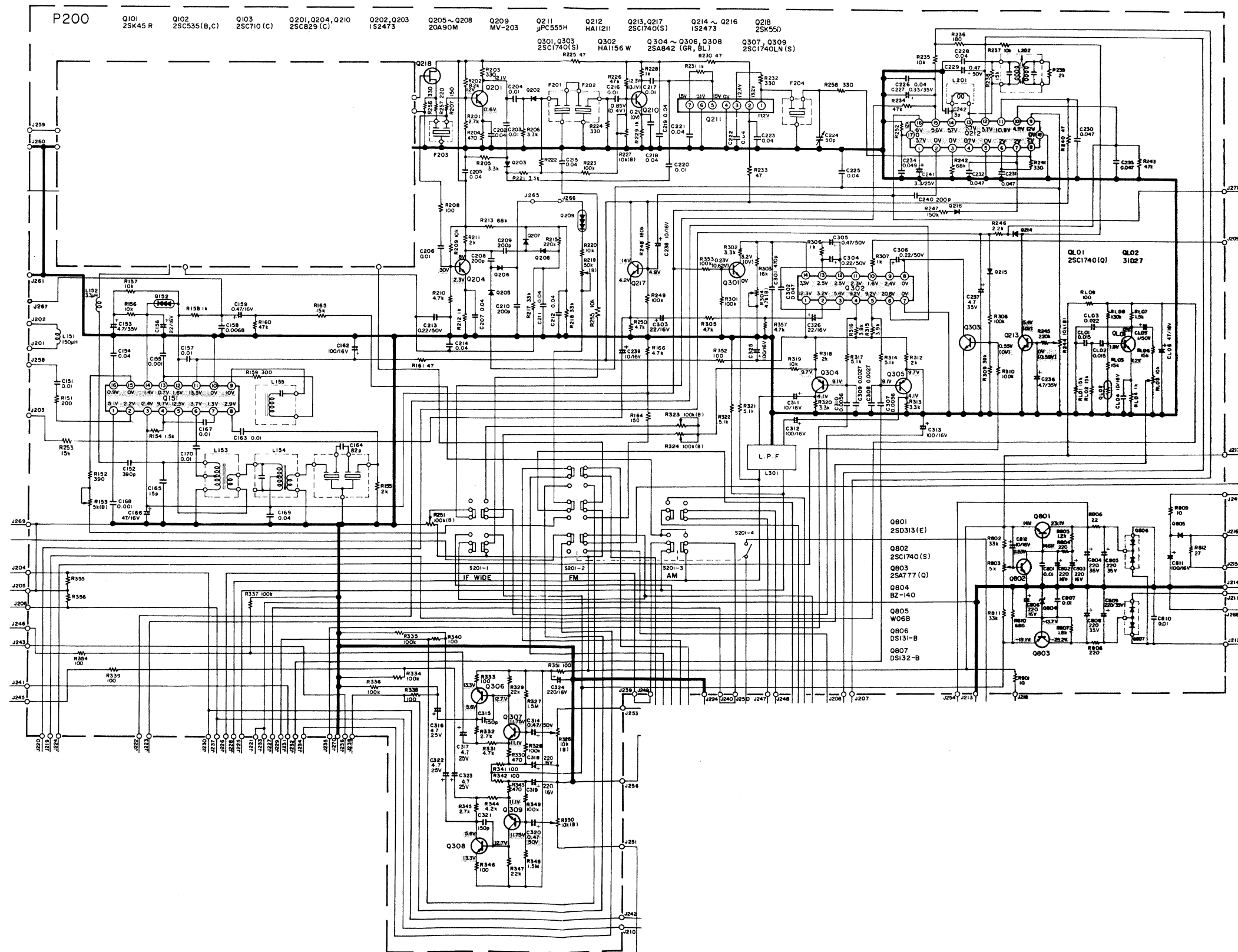


The diagram is a complex electronic circuit for a radio receiver. It includes several main sections labeled P200, P100, PC01, PS01, PB00, and PZ01. The circuit is populated with numerous components, including resistors (R), capacitors (C), inductors (L), and vacuum tubes (Q). The components are interconnected by a dense network of lines representing the circuit connections. At the bottom left, there is a list of components: Q801, Q802, W05B, Q803, Q805, Q808, 25C1740(S), Q804, Q806, 1S2473, Q807, 25A842 (6R, BL). At the bottom right, there is a list of components: Q801, Q802, Q805, 25C8285, Q803, Q804, W05, Q806, 1S2473, Q801, Q802, Q805, 25C8285, Q803, Q804, W05, Q806, 1S2473.

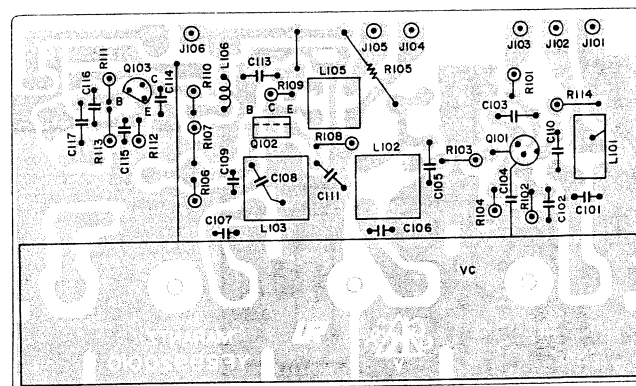
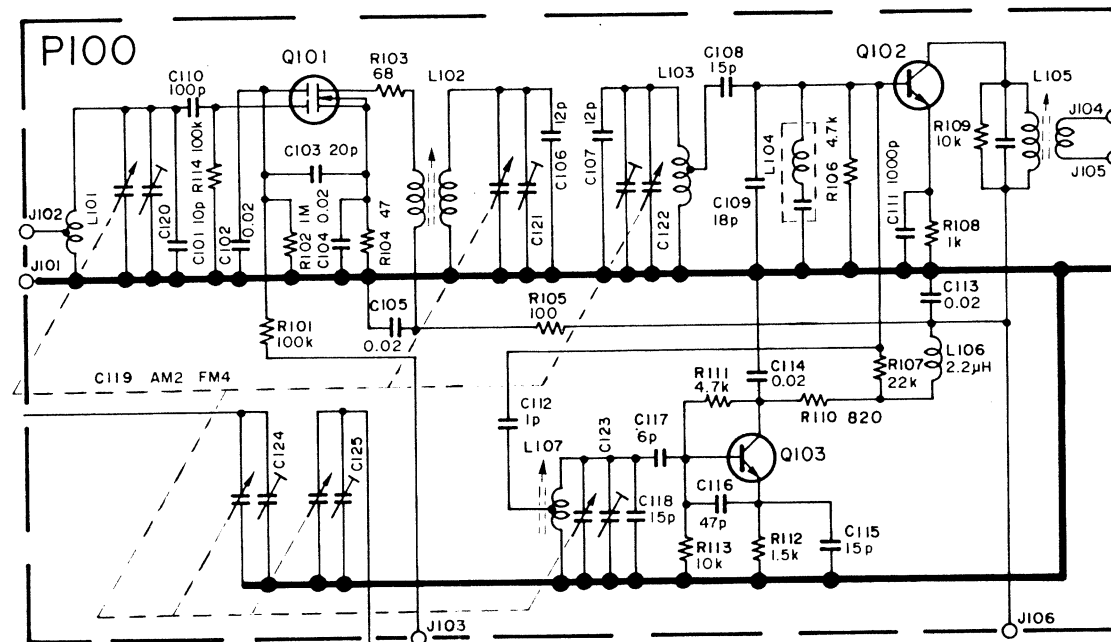
7.5 SCHEMATIC DIAGRAM - EUROPE



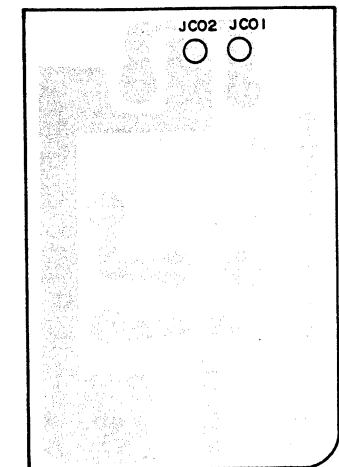
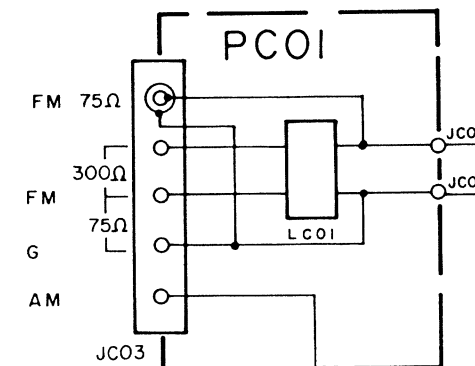
7.6 TUNER BOARD SCHEMATIC DIAGRAM AND COMPONENT LOCATIONS - P200



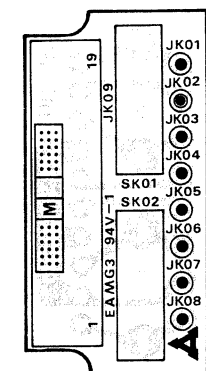
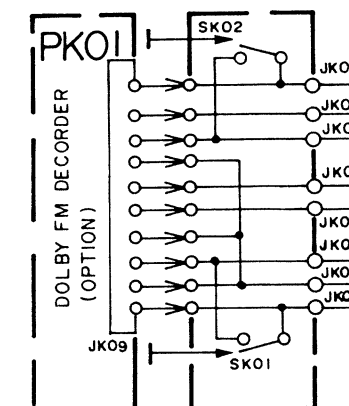
7.7 FRONT END BOARD SCHEMATIC DIAGRAM AND COMPONENT LOCATIONS - P100



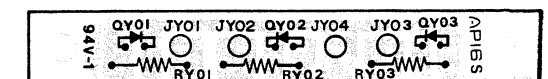
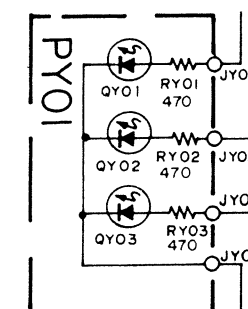
7.8 ANTENNA BOARD SCHEMATIC DIAGRAM AND COMPONENT LOCATIONS - PC01



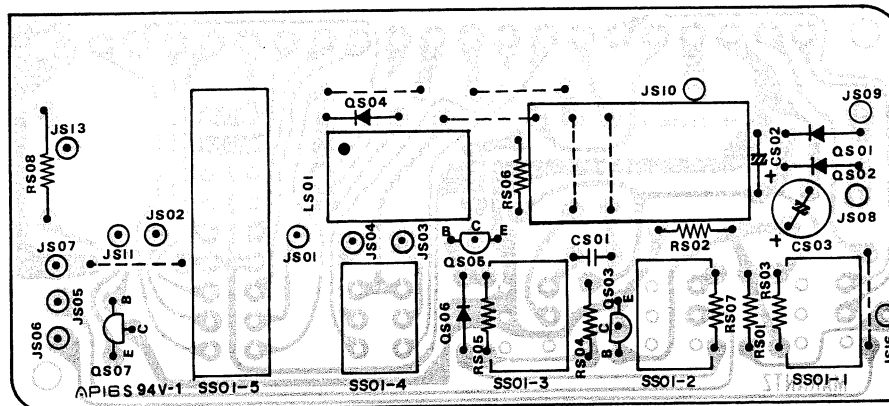
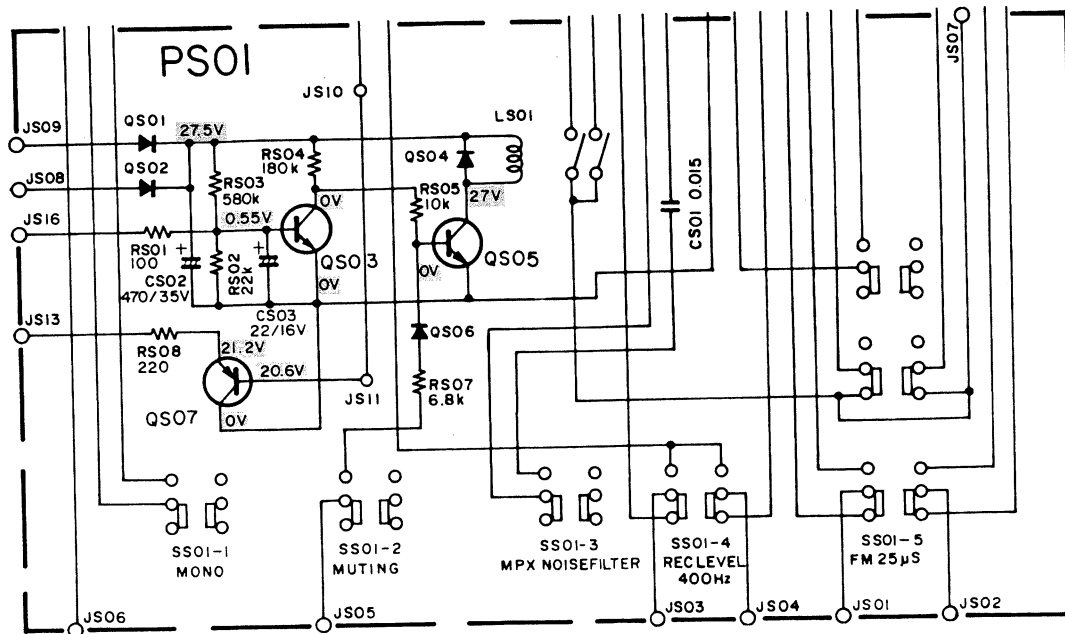
7.9 DOLBY SOCKET BOARD SCHEMATIC DIAGRAM AND COMPONENT LOCATIONS - PK01 - U.S.A. & CANADA



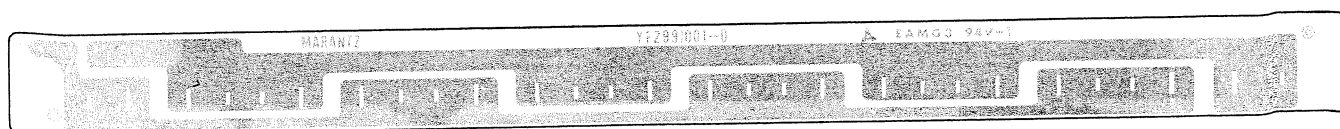
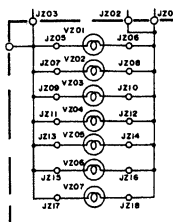
7.10 FUNCTION INDICATOR BOARD SCHEMATIC DIAGRAM COMPONENT LOCATIONS - PY01



7.11 SWITCH BOARD SCHEMATIC DIAGRAM AND COMPONENT LOCATIONS - PS01



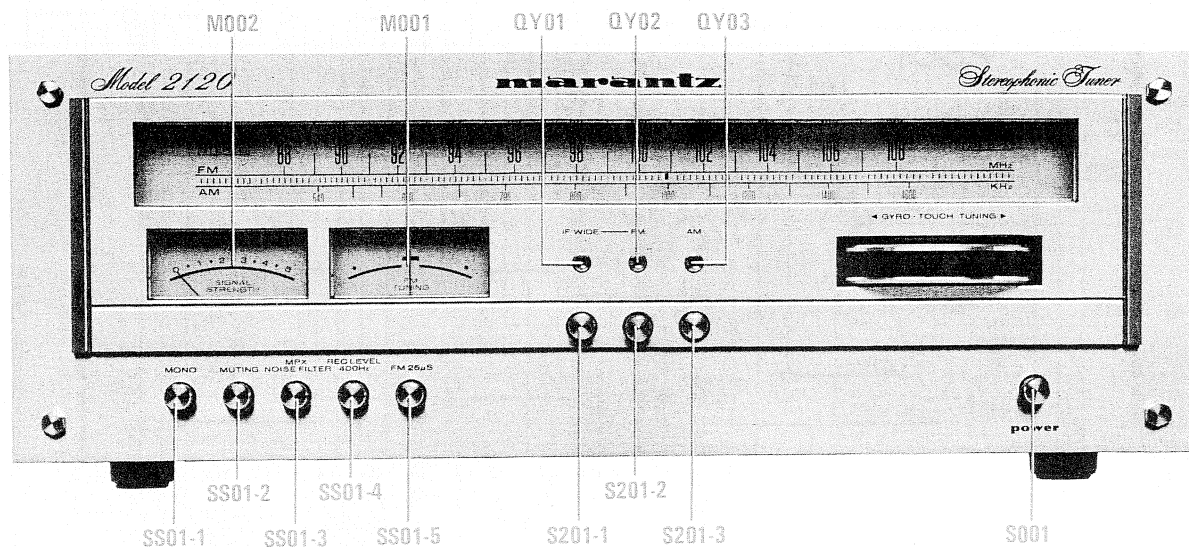
7.12 DIAL LAMP BOARD SCHEMATIC DIAGRAM AND COMPONENT LOCATIONS - PZ01



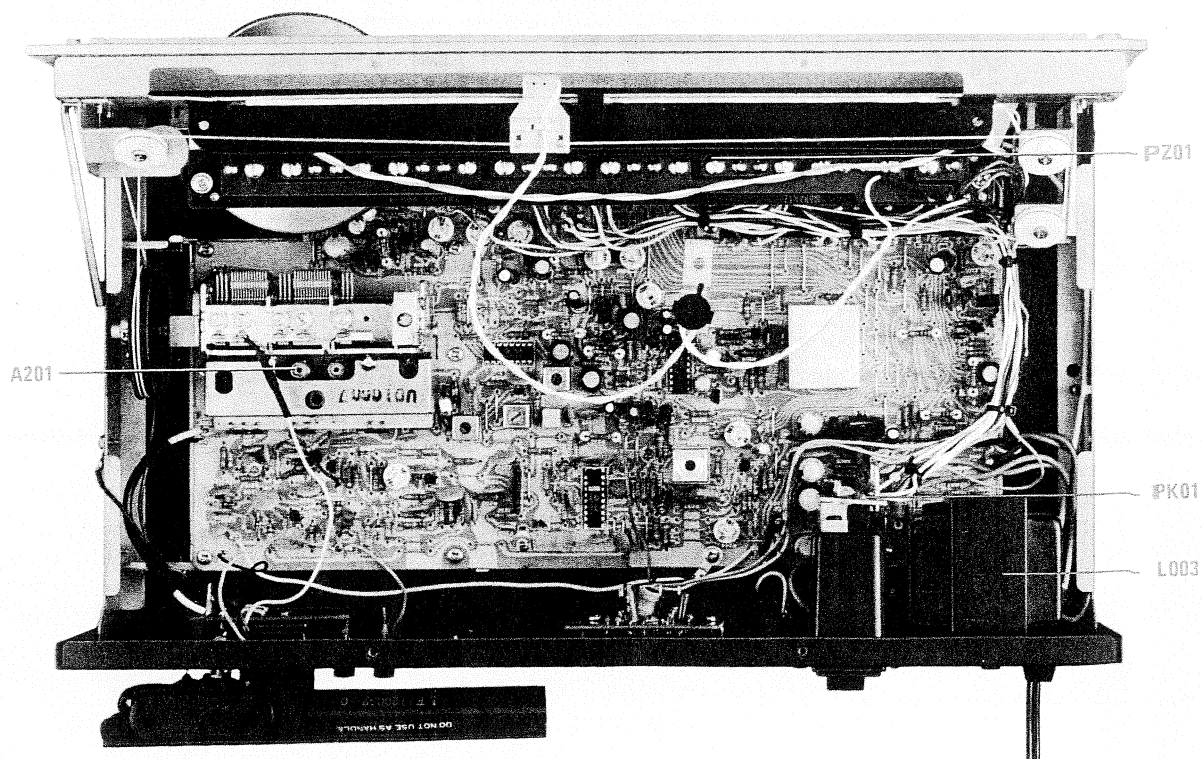
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8. MAJOR COMPONENT LOCATIONS

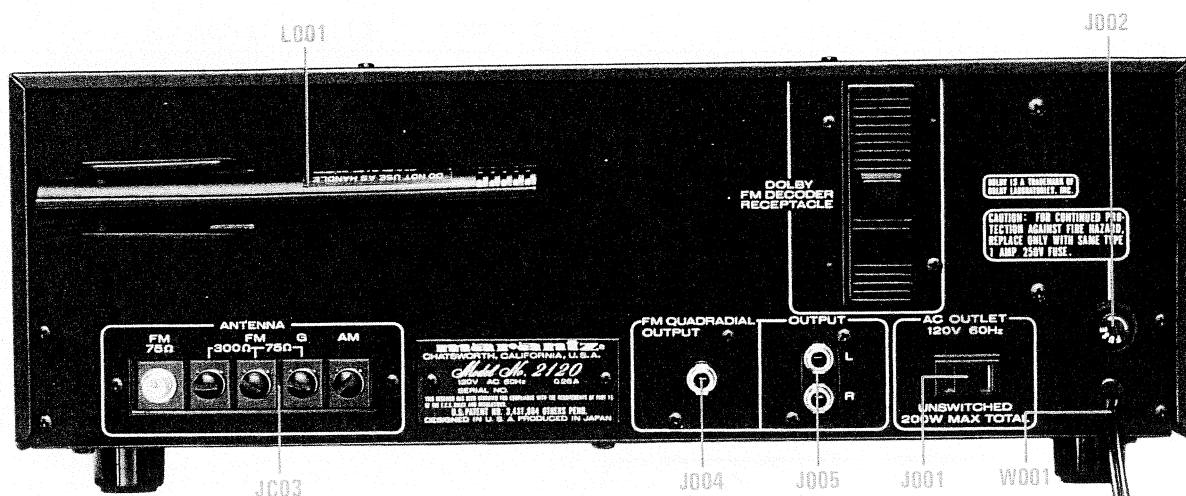
8.1 CABINET - FRONT VIEW - U.S.A. & CANADA



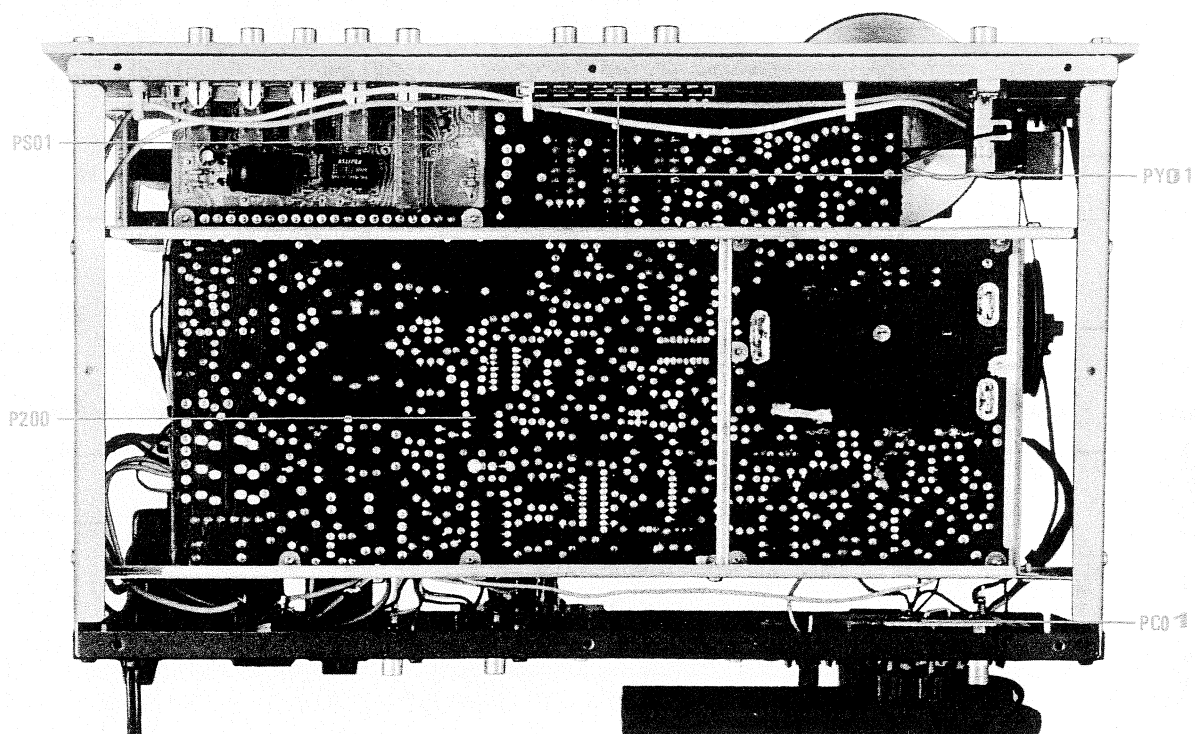
8.2 CHASSIS - TOP VIEW - U.S.A. & CANADA



8.3 CABINET - REAR VIEW - U.S.A. & CANADA

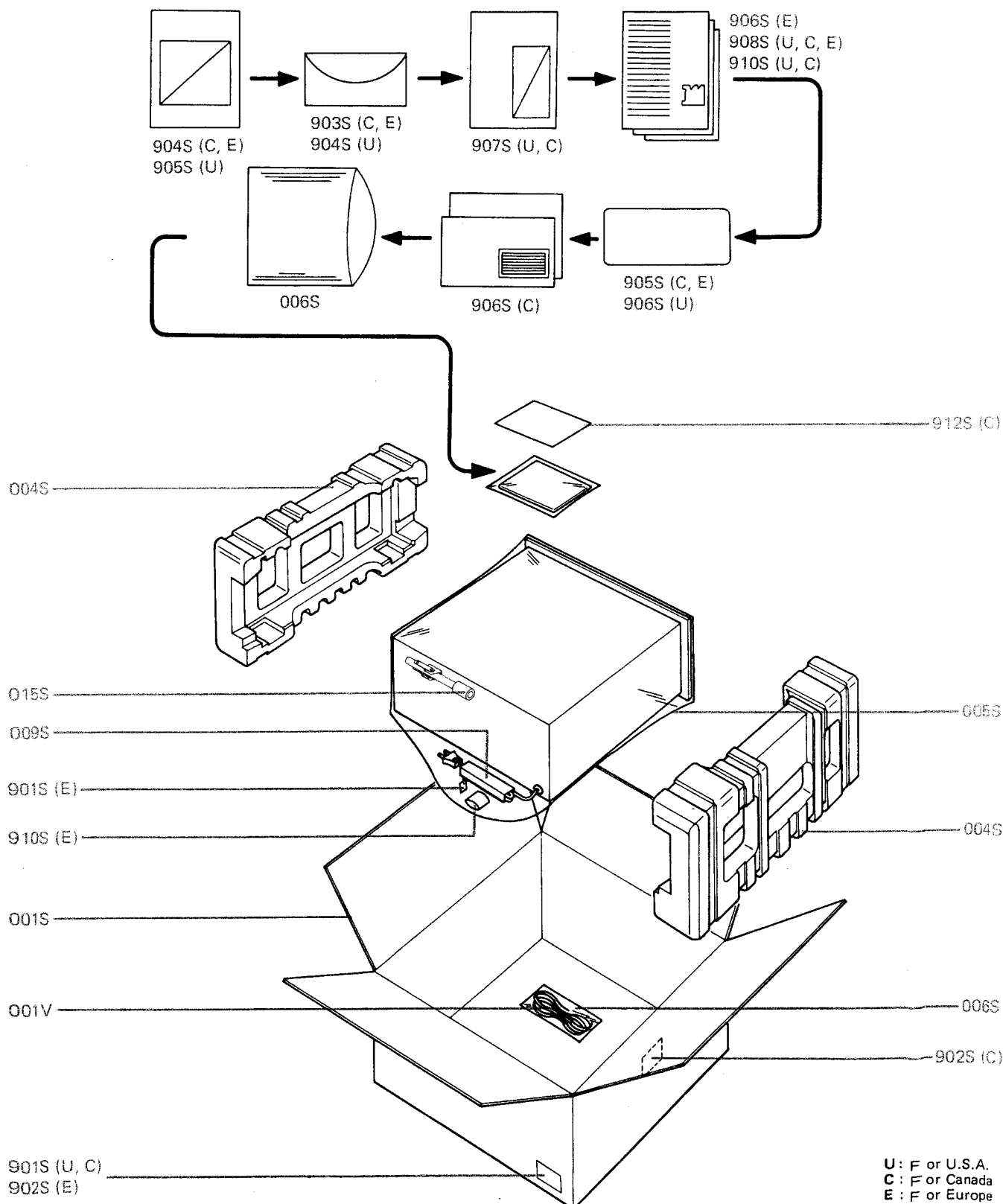


8.4 CHASSIS - BOTTOM VIEW - U.S.A. & CANADA

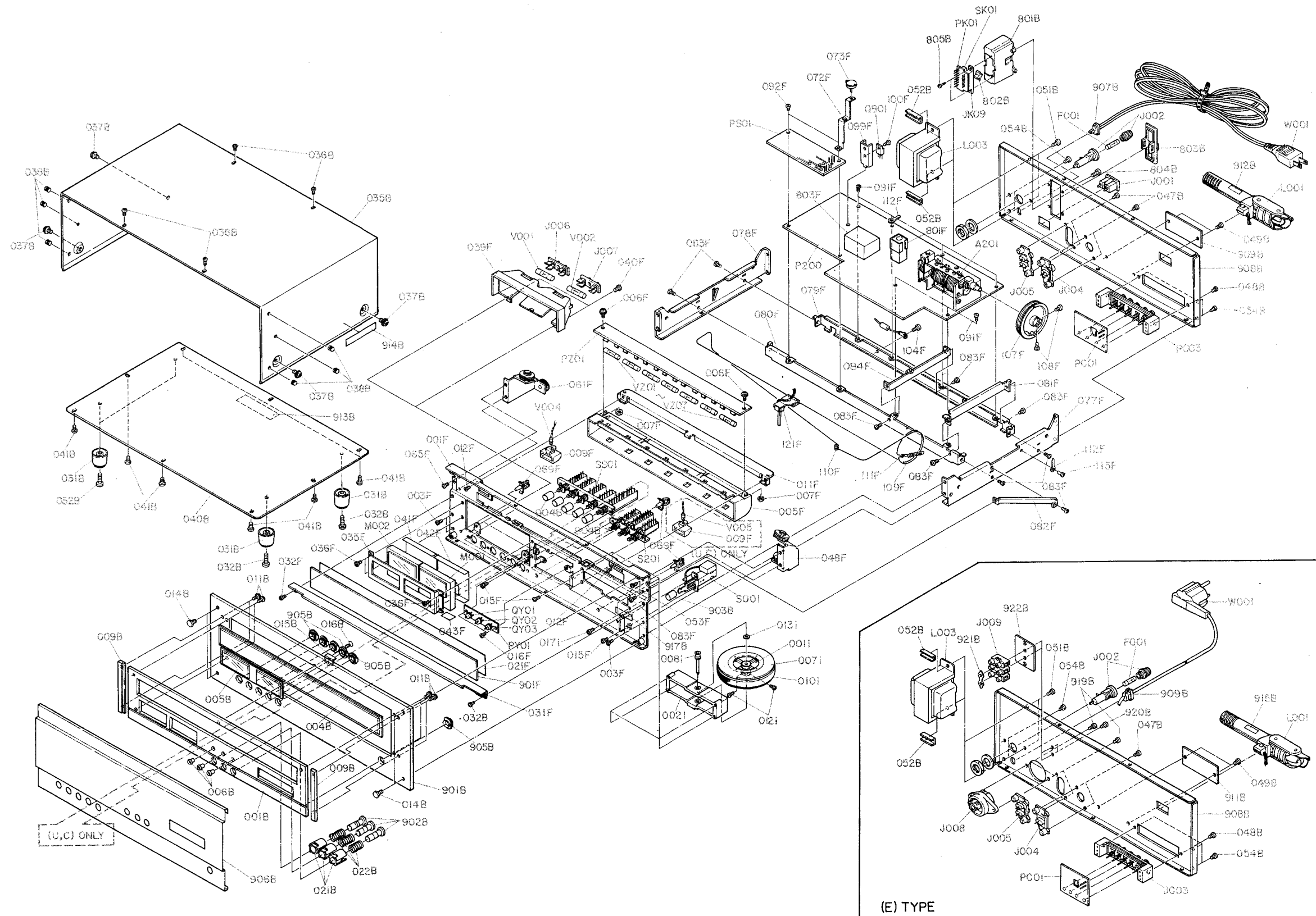


9. EXPLODED VIEWS

9.1 PACKING MATERIAL EXPLODED VIEW



9.2 MECHANICAL EXPLODED VIEW



10. PARTS LIST

U: For U.S.A.
C: For Canada
E: For Europe

REF. DESIG.	Q'TY			PART NO.	DESCRIPTION
	U	C	E		
A	1	1		2992063400	Front Panel Assembly
A1			1	2992063410	Front Panel Assembly
001B	1	1	1	2992063022	Escutcheon
004B	1	1	1	2991158010	Window
005B	1	1	1	2991158022	Window
006B	3	3	3	2979259022	Bushing
009B	2	2	2	2965063050	Escutcheon
011B	8	8	8	51480306A9	F. Washer Screw
015B	1	1	1	2991051100	Guide
016B	1	1	1	51060306S9	P.H.M. Screw, P3x6
021B	3	3	3	2979259012	Bushing
901B	1	1		2992063012	Escutcheon
901B			1	2992063112	Escutcheon
905B	6	6	5	2978259010	Bushing
906B	1	1		2992053010	Cover
906B			1	2992053110	Cover
B	1	1	1	2219273410	Flywheel Assembly
001I	1	1	1	2219273010	Flywheel
007I	2	2	2	2219063030	Escutcheon
010I	1	1	1	2215353010	Ring
012I	1	1	1	51820206B0	P.H.M. Screw, P2x6
C	1	1	1	2991159400	Drum Assembly
107F	1	1	1	2991159010	Drum
108F	2	2	2	51064019A9	P.H.M. Screw, P4x19
109F	1	1	1	71101569M0	Spring
D	1	1	1	1202006430	Hook Assembly
110F	2	2	2	72071605A0	String
112F	1	1	1	1202258010	Hook
PS11	6	6	6	75061251P0	Jumper
P208	26	26	26	2933118020	Spacer
P211	76	76	2	75061251P0	Jumper
P212	3	3	2	75062001P0	Jumper
P213			75	75061251P0	Jumper
P213	1	1	1	75063001P0	Jumper
001F	1	1	1	2991160016	Bracket
001V	1	1	1	ZA02000070	Ext. Antenna, FM
002I	1	1	1	2991104500	Retainer
002V	1	1	1	ZD01500160	Connective Cord
003F	4	4	4	51280306B0	B.H. Tapped Screw, B3x6ST
003V	1	1	1	9013025010	Polyethylene Bag
004S	2	2	2	2970809012	Cushion
005F	1	1	1	2991274014	Reflector
005S	1	1	1	9014335330	Polyethylene Bag
006F	2	2	2	51480308A9	F. Washer Screw
006S	1	1	1	9013025010	Polyethylene Bag
007F	2	2	2	53110303E9	Hexagon Nut
008I	1	1	1	2219112010	Shaft
009F	2	2	2	2218274032	Reflector
009S	1	1	1	2864804010	Sleeve
011F	1	1	1	2991051013	Guide
012F	2	2	2	51042608A0	F.H.M. Screw, F2.6x8

REF. DESIG.	Q'TY			PART NO.	DESCRIPTION
	U	C	E		
013I	1	1	1	59031405G9	Washer
014B	4	4	4	52017069J0	H. Head Bolt
015F	6	6	6	51100306A9	B.H.M. Screw, B3x6
015S	1	1	1	2819056010	Buffer
016B	1	1	1	51060306S9	P.H.M. Screw, P3x6
016F	2	2	2	51280306B0	B.H. Tapped Screw, B3x6ST
017I	4	4	4	51470306A9	L. Washer Screw
021F	1	1	1	2991107010	Sheet
022B	3	3	3	2979115012	Spring
031B	4	4	4	2932057010	Leg
031F	1	1	1	2991269015	Protector
032B	4	4	4	51570410S9	P. Tapped Screw, B4x10ST
032F	3	3	3	51280306B0	B.H. Tapped Screw, B3x6ST
035B	1	1	1	2970257012	Lid
035F	1	1	1	2991160053	Bracket
036B	4	4	4	51280306U0	B.H. Tapped Screw, B3x6ST
036F	4	4	4	51280306B0	B.H. Tapped Screw, B3x6ST
037B	4	4	4	51480406S9	F. Washer Screw
038B	6	6	6	2979259030	Bushing
039F	1	1	1	2218274023	Reflector
040B	1	1	1	2978257023	Lid
040F	2	2	2	51280306B0	B.H. Tapped Screw, B3x6ST
041B	8	8	8	51280410U0	B.H. Tapped Screw, B4x10ST
041F	1	1	1	2991107020	Sheet
042F	1	1	1	2991107020	Sheet
047B	4	4	4	51280308U0	B.H. Tapped Screw, B3x8ST
048B	2	2	2	51280308U0	B.H. Tapped Screw, B3x8ST
048F	1	1	1	2992262512	Pulley
049B	2	2	2	51760306B0	OS Tapped Screw, 3x6
051B	2	2	2	51100408S9	B.H.M. Screw, B4x8
052B	2	2	2	2922005010	Clamper
053F	2	2	2	51280306B0	B.H. Tapped Screw, B3x6ST
054B	4	4	4	51280306U0	B.H. Tapped Screw, B3x6ST
061F	1	1	1	2991262512	Pulley
065F	2	2	2	51280306B0	B.H. Tapped Screw, B3x6ST
069F	3	3	3	2886005060	Clamper
072F	1	1	1	2992005010	Clamper
073F	1	1	1	2908259010	Bushing
077F	1	1	1	2991126014	Stay
078F	1	1	1	2991126024	Stay
079F	1	1	1	2992126030	Stay
080F	1	1	1	2992126040	Stay
081F	1	1	1	2992126050	Stay
082F	1	1	1	2991126060	Stay
083F	10	10	10	51280306B0	B.H. Tapped Screw, B3x6ST
084F	1	1	1	2992126060	Stay
091F	8	8	8	51280306B0	B.H. Tapped Screw, B3x6ST
092F	2	2	2	51280308B0	B.H. Tapped Screw, B3x8ST
099F	1	1	1	2915267020	Heatsink
100F	1	1	1	51100306A9	B.H.M. Screw, B3x6
104F	1	1	1	51280306B0	B.H. Tapped Screw, B3x6
105F	1	1	1	62030049W0	Lug
111F	1	1	1	56382540G0	Eyelet
113F	1	1	1	56382540G0	Eyelet
121F	1	1	1	2991103500	Pointer
801B	1	1	1	2218271050	Holder
801F	1	1	1	3918109010	Shield
802B	1	1	1	2218258010	Hook
803B	1	1	1	2218257030	Lug
804B	2	2	2	51280308U0	B.H. Tapped Screw, B3x8ST

U: For U.S.A.
C: For Canada
E: For Europe

REF. DESIG.	Q'TY			PART NO.	DESCRIPTION
	U	C	E		
805B	2	2		51280308U0	B.H. Tapped Screw, B3x8ST
901F	1	1		2992302013	Dial
901F			1	2992302212	Dial
901S	3			9522815010	Serial No. Card
901S			3	9523015120	Serial No. Card
901S			1	9560000042	Hang Tag
902B	3	3	3	2979154022	Knob
902S			2	9510901020	Label
902S			3	9523015110	Serial No. Card
903B	1	1		2963154022	Knob
903B			1	2970154032	Knob
903S			1	2818813010	Envelope
903S			1	2918813012	Envelope
904B	5	5	4	2970154032	Knob
904S	1			2577813010	Envelope
904S			1	2818851120	Instructions
905S			1	2577851020	Instructions
905S	1	1		9630000180	Guarantee Card
906S	1			2577854012	Guarantee Card
906S			1	2818851140	Instructions
906S			1	9650000050	Service Station Card
907B	1	1		1455259030	Bushing
907S	1			2818854023	Guarantee Card
907S			1	2818854042	Guarantee Card
908B	1	1		2992160212	Bracket
908B			1	2992160223	Bracket
908S	1			2818851040	Instructions
908S	1			2818854140	Guarantee Card
908S			1	2992851310	Instructions
909B			1	1455259050	Bushing
909B	1			2992265010	Indicator
909B			1	2992265020	Indicator
910S			1	2731821010	Silicagel
910S	1			2992851010	Instructions
910S			1	2992851310	Instructions
911B			1	2992265030	Indicator
911S	1			2992801010	Packing Case
911S			1	2992801020	Packing Case
912B	1			2506265060	Indicator
912B			1	2911861170	Label
912S			1	2886851100	Instructions
913B	1			2578861010	Label
913B			1	2911861112	Label
913S			1	2992801010	Packing Case
914B			1	2911861142	Label
914B	1			2932861010	Label
915B			1	2506265060	Indicator
915B	1			9510911010	Label
915B			1	9510911020	Label
916B			1	2578861010	Label
916B	1			9511101030	Label
917B			1	2911861192	Label
917B			1	2932861010	Label
917B	1			2991861010	Label
918B			1	2911861290	Label
919B			2	51100308S9	B.H.M. Screw, B3x8
920B			2	51100314S9	B.H.M. Screw, B3x14
921B			1	2970005010	Clamper
922B			1	4113120010	Insulator

REF. DESIG.	QTY			PART NO.	DESCRIPTION
	U	C	E		
JC01	1	1	1	YP10001130	ELECTRICAL PARTS
JC02	1	1	1	YP10001130	Plug
JC03	1	1	1	BY04050010	Terminal, Antenna
LC01	1	1	1	LB30075260	Balun Coil
PC01	1	1	1	YK29921430	P.W. Board, Antenna
	1	1	1	ZZ29921430	P.W. Board Assembly
JK01	1	1		YP10001130	Plug
JK02	1	1		YP10001130	Plug
JK03	1	1		YP10001130	Plug
JK04	1	1		YP10001130	Plug
JK05	1	1		YP10001130	Plug
JK06	1	1		YP10001130	Plug
JK07	1	1		YP10001130	Plug
JK08	1	1		YP10001130	Plug
JK09	1	1		YJ07000120	Jack, 10P
PK01	1	1		YA22180310	P.W. Board, Dolby Socket
	1	1		ZZ22180310	P.W. Board Assembly
SK01	1	1		SC01020240	Micro Switch
SK02	1	1		SC01020240	Micro Switch
CL01	1	1	1	DF15153010	Cap., Film, 0.015μF
CL02	1	1	1	DF15153010	Cap., Film, 0.015μF
CL03	1	1	1	DF15223010	Cap., Film, 0.022μF
CL04	1	1	1	EA10601690	Cap., Elect., 10μF, 16V
CL05	1	1	1	EA10505090	Cap., Elect., 1μF, 50V
CL06	1	1	1	EA47601690	Cap., Elect., 47μF, 16V
QL01	1	1	1	HT31740100	Transistor, 2SC1740 Q
QL02	1	1	1	HH00002120	Thermistor, 31D27
RL01	1	1	1	RT05153140	Res., Fixed, 15kΩ ±5%, 1/4W
RL02	1	1	1	RT05153140	Res., Fixed, 15kΩ ±5%, 1/4W
RL03	1	1	1	GD05153140	Res., Fixed, 15kΩ ±5%, 1/4W
RL04	1	1	1	RT05102140	Res., Fixed, 1kΩ ±5%, 1/4W
RL05	1	1	1	RA01030250	Res., Semifixed, 10kΩ(B)
RL06	1	1	1	RT05153140	Res., Fixed, 15kΩ ±5%, 1/4W
RL07	1	1	1	RT05152140	Res., Fixed, 1.5kΩ ±5%, 1/4W
RL08	1	1	1	RT05134140	Res., Fixed, 13kΩ ±5%, 1/4W
RL09	1	1	1	RT05101140	Res., Fixed, 10kΩ ±5%, 1/4W
CS01	1	1	1	DF15153010	Cap., Film, 0.015μF, 50V
CS02	1	1	1	EA47703590	Cap., Elect., 470μF, 35V
CS03	1	1	1	EA10701090	Cap., Elect., 100μF, 10V
JS01	1	1	1	YP10001130	Plug
JS02	1	1	1	YP10001130	Plug
JS03	1	1	1	YP10001130	Plug
JS04	1	1	1	YP10001130	Plug
JS05	1	1	1	YP10001130	Plug
JS06	1	1	1	YP10001130	Plug, Pin
JS07	1	1	1	YP10001130	Plug, Pin
JS08	1	1	1	YP10001130	Plug, Pin
JS09	1	1	1	YP10001130	Plug, Pin
JS10	1	1	1	YP10001130	Plug, Pin
JS11	1	1	1	YP10001130	Plug, Pin
JS12	1	1	1	YP10001130	Plug, Pin
JS13	1	1	1	YP10001130	Plug, Pin
JS14	1	1	1	YP10001130	Plug, Pin
JS15	1	1	1	YP10001130	Plug, Pin
JS16	1	1	1	YP10001130	Plug, Pin
LS01	1	1	1	LY20240120	Relay, FR164-4D24/2AS

U : For U.S.A.
C : For Canada
E : For Europe

REF. DESIG.	Q'TY			PART NO.	DESCRIPTION
	U	C	E		
PS01	1	1	1	YK29921420	P.W. Board, Switch
	1	1	1	ZZ29921420	P.W. Board Assembly
QS01	1	1	1	HD20005010	Diode, W06B
QS02	1	1	1	HD20005010	Diode, W06B
QS03	1	1	1	HT317401S0	Transistor, 2SC1740S
QS04	1	1	1	HD20001210	Diode, 1S2473
QS05	1	1	1	HT317401S0	Transistor, 2SC1740S
QS06	1	1	1	HD20001210	Diode, 1S2473
QS07	1	1	1	HT108422A0	Transistor, 2SA842 GR or BL
QS08	1	1	1	HT317401S0	Transistor, 2SC1740S
RS01	1	1	1	GD05101140	Res., Fixed, 100Ω ±5%, ¼W
RS02	1	1	1	GD05223140	Res., Fixed, 22kΩ ±5%, ¼W
RS03	1	1	1	GD05624140	Res., Fixed, 620kΩ ±5%, ¼W
RS04	1	1	1	GD05184140	Res., Fixed, 180kΩ ±5%, ¼W
RS05	1	1	1	GD05103140	Res., Fixed, 10kΩ ±5%, ¼W
RS06	1	1	1	GD05821140	Res., Fixed, 820Ω ±5%, ¼W
RS07	1	1	1	GD05682140	Res., Fixed, 6.8kΩ ±5%, ¼W
RS08	1	1	1	GU05221120	Res., Fixed, 220Ω ±5%, ¼W
RS09	1	1	1	RT05223140	Res., Fixed, 22kΩ ±5%, ¼W
SS01	1	1	1	SP04040180	Pushswitch, Mode
SS01	1	1	1	SP06050100	Pushswitch, Mode
JY01	1	1	1	YP10001130	Plug
JY02	1	1	1	YP10001130	Plug
JY03	1	1	1	YP10001130	Plug
JY04	1	1	1	YP10001130	Plug
PY01	1	1	1	YK29921440	P.W. Board, L.E.D.
	1	1	1	ZZ29921440	P.W. Board Assembly
QY01	1	1	1	HI10004030	L.E.D., Wide
QY02	1	1	1	HI10004030	L.E.D., FM
QY03	1	1	1	HI10004030	L.E.D., AM
RY01	1	1	1	GD05471140	Res., Fixed, 470Ω ±5%, ¼W
RY02	1	1	1	GD05471140	Res., Fixed, 470Ω ±5%, ¼W
RY03	1	1	1	GD05471140	Res., Fixed, 470Ω ±5%, ¼W
JZ01	1	1	1	YP10001130	Plug
JZ02	1	1	1	YP10001130	Plug
JZ03	1	1	1	YP10001130	Plug
JZ04	1	1	1	YP10001130	Plug
JZ05	1	1	1	YJ08000170	Jack, Lamp Holder
JZ06	1	1	1	YJ08000170	Jack, Lamp Holder
JZ07	1	1	1	YJ08000170	Jack, Lamp Holder
JZ08	1	1	1	YJ08000170	Jack, Lamp Holder
JZ09	1	1	1	YJ08000170	Jack, Lamp Holder
JZ10	1	1	1	YJ08000170	Jack, Lamp Holder
JZ11	1	1	1	YJ08000170	Jack, Lamp Holder
JZ12	1	1	1	YJ08000170	Jack, Lamp Holder
JZ13	1	1	1	YJ08000170	Jack, Lamp Holder
JZ14	1	1	1	YJ08000170	Jack, Lamp Holder
JZ15	1	1	1	YJ08000170	Jack, Lamp Holder
JZ16	1	1	1	YJ08000170	Jack, Lamp Holder
JZ17	1	1	1	YJ08000170	Jack, Lamp Holder
JZ18	1	1	1	YJ08000170	Jack, Lamp Holder
PZ01	1	1	1	YF29910010	P.W. Board, Dial Lamp
	1	1	1	ZZ29910040	P.W. Board Assembly
VZ01	1	1	1	IN10080070	Lamp, Dial, 8V 200mA
VZ02	1	1	1	IN10080070	Lamp, Dial, 8V 200mA

REF. DESIG.	Q'TY			PART NO.	DESCRIPTION
	U	C	E		
VZ03	1	1	1	IN10080070	Lamp, Dial, 8V 200mA
VZ04	1	1	1	IN10080070	Lamp, Dial, 8V 200mA
VZ05	1	1	1	IN10080070	Lamp, Dial, 8V 200mA
VZ06	1	1	1	IN10080070	Lamp, Dial, 8V 200mA
VZ07	1	1	1	IN10080070	Lamp, Dial, 8V 200mA
C001	1	1	1	EA33601090	Cap., Elect., 330μF, 10V
C002	1	1	1	DO07473540	Cap., Oil-Paper, Line
C003	1	1	1	DO07473540	Cap., Oil-Paper, Line
F001	1	1	1	FS10050800	Fuse, 250V 500mA (SEMKO)
F001	1	1	1	FS10100080	Fuse, 250V 1A (UL)
G001	1	1	1	BF10400030	Cap. Comp.
G001	1	1	1	BF10400050	Cap. Comp.
J001	1	1	1	YJ04000560	Jack, AC Outlet
J002	1	1	1	YJ08000120	Jack, Fuse Holder
J002	1	1	1	YJ08000220	Jack, Fuse Holder
J004	1	1	1	YT02010130	Terminal, Quad. Output
J005	1	1	1	YT02020140	Terminal, Output
J006	1	1	1	YJ08000190	Jack, Meter Lamp Holder
J007	1	1	1	YJ08000190	Jack, Meter Lamp Holder
J008	1	1	1	BY03110010	Plug, Voltage Selector
J009	1	1	1	YL09030010	Terminal, 3P (SEMKO)
L001	1	1	1	LF11200520	Ant., Coil, AM
L002	1	1	1	LC13320020	Choke Coil, 3.3μH
L003	1	1	1	TS16015050	Power Transformer
L003	1	1	1	TS16015060	Power Transformer
M001	1	1	1	IM11055010	D.C. Meter, FM Tuning
M002	1	1	1	IM11055020	D.C. Meter, Signal Strength
R001	1	1	1	GT05225120	Res., Fixed, 2.2MΩ ±5%, ¼W
S001	1	1	1	SP02010270	Pushswitch, Power (UL)
S001	1	1	1	SP04010250	Pushswitch, Power (SEMKO)
V001	1	1	1	IN10080430	Lamp, Meter, 8V 300mA (Blue)
V002	1	1	1	IN10080430	Lamp, Meter, 8V 300mA (Blue)
V004	1	1	1	IN10080340	Lamp, Stereo, 8V 60mA
V005	1	1	1	IN10080340	Lamp, Dolby
W001	1	1	1	YC01900030	A.C. Power Cord
W001	1	1	1	YC02400220	A.C. Power Cord
C101	1	1	1	DD12100060	Cap., Ceramic, 10pF
C102	1	1	1	DK18203030	Cap., Ceramic, 0.02μF
C103	1	1	1	DD16200010	Cap., Ceramic, 20pF
C104	1	1	1	DK18203030	Cap., Ceramic, 0.02μF
C105	1	1	1	DK18203030	Cap., Ceramic, 0.02μF
C106	1	1	1	DD16120020	Cap., Ceramic, 12pF
C107	1	1	1	DD16120020	Cap., Ceramic, 12pF
C108	1	1	1	DD16150040	Cap., Ceramic, 15pF
C109	1	1	1	DD15180010	Cap., Ceramic, 18pF
C110	1	1	1	DD16101010	Cap., Ceramic, 100pF
C111	1	1	1	DK17102010	Cap., Ceramic, 1000pF
C112	1	1	1	DD10010020	Cap., Ceramic, 1pF
C113	1	1	1	DK18203030	Cap., Ceramic, 0.02μF
C114	1	1	1	DK18203030	Cap., Ceramic, 0.02μF
C115	1	1	1	DD16150030	Cap., Ceramic, 15pF
C116	1	1	1	DD16470020	Cap., Ceramic, 47pF
C117	1	1	1	DD16060010	Cap., Ceramic, 6pF
C118	1	1	1	DD15150020	Cap., Ceramic, 15pF
C119	1	1	1	CA42600010	Cap., Variable, AM2/FM4
C151	1	1	1	DK17103010	Cap., Ceramic, 0.01μF
C152	1	1	1	DF65391010	Cap., Film, 390pF
C153	1	1	1	EA47503590	Cap., Elect., 4.7μF, 35V
C154	1	1	1	DK18403020	Cap., Ceramic, 0.04μF
C155	1	1	1	DK17102010	Cap., Ceramic, 0.001μF

U : For U.S.A.
C : For Canada
E : For Europe

REF. DESIG.	Q'TY			PART NO.	DESCRIPTION
	U	C	E		
C156	1	1	1	EA22601690	Cap., Elect., 22 μ F, 16V
C157	1	1	1	DK18103010	Cap., Ceramic, 0.01 μ F
C158	1	1	1	DK16682010	Cap., Ceramic, 0.0068 μ F
C159	1	1	1	EE47405010	Cap., Elect., 0.47 μ F, 50V
C160	1	1	1	EA10505090	Cap., Elect., 1 μ F, 50V
C161	1	1	1	DK18403020	Cap., Ceramic, 0.04 μ F
C162	1	1	1	EA10701690	Cap., Elect., 100 μ F, 16V
C163	1	1	1	DK17103010	Cap., Ceramic, 0.01 μ F
C164	1	1	1	DD16600010	Cap., Ceramic, 60pF
C165	1	1	1	DD16150010	Cap., Ceramic, 15pF
C166	1	1	1	EA47601690	Cap., Elect., 47 μ F, 16V
C167	1	1	1	DK17103010	Cap., Ceramic, 0.01 μ F
C168	1	1	1	DK17102010	Cap., Ceramic, 0.001 μ F
C169	1	1	1	DK18403020	Cap., Ceramic, 0.04 μ F
C170	1	1	1	DF15103010	Cap., Film, 0.01 μ F
F151	1	1	1	FF10045180	Ceramic Filter, SFZ455A
J101	1	1	1	YP10001510	Plug
J102	1	1	1	YP10001510	Plug
J103	1	1	1	YP10001510	Plug
J104	1	1	1	YP10001510	Plug
J105	1	1	1	YP10001510	Plug
J106	1	1	1	YP10001510	Plug
L104	1	1	1	FF31070030	L.C. Filter, QC113
L105	1	1	1	LI70039010	I.F.T., TM1222
L106	1	1	1	LC12220010	Choke Coil, 2.2 μ H
L151	1	1	1	LC11540020	Choke Coil, 150 μ H
L152	1	1	1	LC13320020	Choke Coil, 3.3 μ H
L153	1	1	1	LO10010480	OSC Coil, AM
L154	1	1	1	LI10015010	I.F.T., AM
L155	1	1	1	LI10015060	I.F.T., AM
P100	1	1	1	YF29920010	P.W. Board, FM Front End
A201	1	1	1	AV01202090	P.W. Board Assembly
Q101	1	1	1	HF40045180	F.E.T., 3SK45 B
Q102	1	1	1	HT30535280	Transistor, 2SC535 B or C
Q103	1	1	1	HT307101C0	Transistor, 2SC710 C
Q151	1	1	1	HC10019010	I.C., HA1197
Q152	1	1	1	HV00006120	Varistor, MV-203
R101	1	1	1	GD05104140	Res., Fixed, 100k Ω $\pm$ 5%, $\frac{1}{4}$ W
R102	1	1	1	GD05105140	Res., Fixed, 1M Ω $\pm$ 5%, $\frac{1}{4}$ W
R103	1	1	1	GD05680140	Res., Fixed, 68 Ω $\pm$ 5%, $\frac{1}{4}$ W
R104	1	1	1	GD05470140	Res., Fixed, 47 Ω $\pm$ 5%, $\frac{1}{4}$ W
R105	1	1	1	GD05101140	Res., Fixed, 100 Ω $\pm$ 5%, $\frac{1}{4}$ W
R106	1	1	1	GD05472140	Res., Fixed, 4.7k Ω $\pm$ 5%, $\frac{1}{4}$ W
R107	1	1	1	GD05223140	Res., Fixed, 22k Ω $\pm$ 5%, $\frac{1}{4}$ W
R108	1	1	1	GD05102140	Res., Fixed, 1k Ω $\pm$ 5%, $\frac{1}{4}$ W
R109	1	1	1	GD05103140	Res., Fixed, 10k Ω $\pm$ 5%, $\frac{1}{4}$ W
R110	1	1	1	GD05101140	Res., Fixed, 100 Ω $\pm$ 5%, $\frac{1}{4}$ W
R111	1	1	1	GD05472140	Res., Fixed, 4.7k Ω $\pm$ 5%, $\frac{1}{4}$ W
R112	1	1	1	GD05152140	Res., Fixed, 1.5k Ω $\pm$ 5%, $\frac{1}{4}$ W
R113	1	1	1	GD05103140	Res., Fixed, 10k Ω $\pm$ 5%, $\frac{1}{4}$ W
R114	1	1	1	GD05104140	Res., Fixed, 100k Ω $\pm$ 5%, $\frac{1}{4}$ W
R151	1	1	1	RT05201140	Res., Fixed, 200 Ω $\pm$ 5%, $\frac{1}{4}$ W
R152	1	1	1	RT05391140	Res., Fixed, 390 Ω $\pm$ 5%, $\frac{1}{4}$ W
R153	1	1	1	RA05020200	Res., Semifixed, 5k Ω (B)
R154	1	1	1	RT05152140	Res., Fixed, 1.5k Ω $\pm$ 5%, $\frac{1}{4}$ W
R155	1	1	1	RT05202140	Res., Fixed, 2k Ω $\pm$ 5%, $\frac{1}{4}$ W
R156	1	1	1	RT05103140	Res., Fixed, 10k Ω $\pm$ 5%, $\frac{1}{4}$ W
R157	1	1	1	RT05103140	Res., Fixed, 10k Ω $\pm$ 5%, $\frac{1}{4}$ W

REF. DESIG.	Q'TY			PART NO.	DESCRIPTION
	U	C	E		
R158	1	1	1	RT05102140	Res., Fixed, 1k Ω $\pm$ 5%, $\frac{1}{4}$ W
R159	1	1	1	RT05301140	Res., Fixed, 300 Ω $\pm$ 5%, $\frac{1}{4}$ W
R160	1	1	1	RT05473140	Res., Fixed, 47k Ω $\pm$ 5%, $\frac{1}{4}$ W
R161	1	1	1	RT05470140	Res., Fixed, 47 Ω $\pm$ 5%, $\frac{1}{4}$ W
R162	1	1	1	RT05104140	Res., Fixed, 100k Ω $\pm$ 5%, $\frac{1}{4}$ W
R163	1	1	1	RT05124140	Res., Fixed, 120k Ω $\pm$ 5%, $\frac{1}{4}$ W
R164	1	1	1	RT05151140	Res., Fixed, 150 Ω $\pm$ 5%, $\frac{1}{4}$ W
R165	1	1	1	RT05273140	Res., Fixed, 27k Ω $\pm$ 5%, $\frac{1}{4}$ W
R166	1	1	1	RT05472140	Res., Fixed, 4.7k Ω $\pm$ 5%, $\frac{1}{4}$ W
C201	1	1	1	DK17103010	Cap., Ceramic, 0.01 μ F
C202	1	1	1	DK18403020	Cap., Ceramic, 0.04 μ F
C203	1	1	1	DK17103010	Cap., Ceramic, 0.01 μ F
C204	1	1	1	DK17103010	Cap., Ceramic, 0.01 μ F
C205	1	1	1	DK18403020	Cap., Ceramic, 0.04 μ F
C206	1	1	1	DK17103010	Cap., Ceramic, 0.01 μ F
C207	1	1	1	DK18403020	Cap., Ceramic, 0.04 μ F
C208	1	1	1	DD16201010	Cap., Ceramic, 200pF
C209	1	1	1	DD16201010	Cap., Ceramic, 200pF
C210	1	1	1	DD16201010	Cap., Ceramic, 200pF
C211	1	1	1	DK18403020	Cap., Ceramic, 0.04 μ F
C212	1	1	1	DK18403020	Cap., Ceramic, 0.04 μ F
C213	1	1	1	EV22403560	Cap., Elect., 0.22 μ F, 35V
C214	1	1	1	DK18403020	Cap., Ceramic, 0.04 μ F
C215	1	1	1	DK18403020	Cap., Ceramic, 0.04 μ F
C216	1	1	1	DK17103010	Cap., Ceramic, 0.01 μ F
C217	1	1	1	DK17103010	Cap., Ceramic, 0.01 μ F
C218	1	1	1	DK18403020	Cap., Ceramic, 0.04 μ F
C219	1	1	1	DK18403020	Cap., Ceramic, 0.04 μ F
C220	1	1	1	DK17103010	Cap., Ceramic, 0.01 μ F
C221	1	1	1	DK18403020	Cap., Ceramic, 0.04 μ F
C222	1	1	1	DK18403020	Cap., Ceramic, 0.04 μ F
C223	1	1	1	DK18403020	Cap., Ceramic, 0.04 μ F
C224	1	1	1	CT15000010	Cap., Trimming, 50pF
C225	1	1	1	DK18403020	Cap., Ceramic, 0.04 μ F
C226	1	1	1	DK18403020	Cap., Ceramic, 0.04 μ F
C227	1	1	1	EV33403560	Cap., Elect., 0.33 μ F, 35V
C228	1	1	1	DK18403020	Cap., Ceramic, 0.04 μ F
C229	1	1	1	EA47405090	Cap., Elect., 0.47 μ F, 50V
C230	1	1	1	DK18403020	Cap., Ceramic, 0.047 μ F
C231	1	1	1	DK18403020	Cap., Ceramic, 0.047 μ F
C232	1	1	1	DK18403020	Cap., Ceramic, 0.047 μ F
C233	1	1	1	EA33502590	Cap., Elect., 3.3 μ F, 16V
C234	1	1	1	DK18403020	Cap., Ceramic, 0.047 μ F
C235	1	1	1	DK18403020	Cap., Ceramic, 0.047 μ F
C236	1	1	1	EA22601690	Cap., Elect., 22 μ F, 16V
C237	1	1	1	EA47501690	Cap., Elect., 4.7 μ F, 16V
C238	1	1	1	EA10601690	Cap., Elect., 10 μ F, 16V
C239	1	1	1	EA10601690	Cap., Elect., 10 μ F, 16V
C240	1	1	1	DK16101500	Cap., Ceramic, 100pF
F201	1	1	1	FF11070050	Ceramic Filter, SFEI 0.7MD1
F201	1	1	1	FF11070060	Ceramic Filter, SFEI 0.7MS2
F202	1	1	1	FF11070050	Ceramic Filter, SFEI 0.7MD1
F202	1	1	1	FF11070060	Ceramic Filter, SFEI 0.7MS2
F203	1	1	1	FF11070050	Ceramic Filter, SFEI 0.7MD1
F204	1	1	1	FF11070050	Ceramic Filter, SFEI 0.7MD1
J201	1	1	1	YP10001130	Plug
J202	1	1	1	YP10001130	Plug
J203	1	1	1	YP10001130	Plug
J204	1	1	1	YP10001130	Plug
J205	1	1	1	YP10001130	Plug

U : For U.S.A.
C : For Canada
E : For Europe

REF. DESIG.	Q'TY			PART NO.	DESCRIPTION
	U	C	E		
J206	1	1	1	YP10001130	Plug
J207	1	1	1	YP10001130	Plug
J208	1	1	1	YP10001130	Plug
J209	1	1	1	YP10001130	Plug
J210	1	1	1	YP10001130	Plug
J211	1	1	1	YP10001130	Plug, Pin
J212	1	1	1	YP10001130	Plug, Pin
J213	1	1	1	YP10001130	Plug
J214	1	1	1	YP10001130	Plug
J215	1	1	1	YP10001130	Plug
J216	1	1	1	YP10001130	Plug
J217	1	1	1	YP10001130	Plug
J218	1	1	1	YP10001130	Plug
J219	1	1	1	YP10001130	Plug
J220	1	1	1	YP10001130	Plug
J221	1	1	1	YP10001130	Plug
J222	1	1	1	YP10001130	Plug
J223	1	1	1	YP10001130	Plug
J224	1	1	1	YP10001130	Plug
J225	1	1	1	YP10001130	Plug
J226	1	1	1	YP10001130	Plug
J227	1	1	1	YP10001130	Plug
J228	1	1	1	YP10001130	Plug
J229	1	1	1	YP10001130	Plug
J230	1	1	1	YP10001130	Plug
J231	1	1	1	YP10001130	Plug
J232	1	1	1	YP10001130	Plug
J233	1	1	1	YP10001130	Plug
J234	1	1	1	YP10001130	Plug
J235	1	1	1	YP10001130	Plug
J236	1	1	1	YP10001130	Plug
J237	1	1	1	YP10001130	Plug
J238	1	1	1	YP10001130	Plug
J239	1	1	1	YP10001130	Plug
J240	1	1	1	YP10001130	Plug
J241	1	1	1	YP10001130	Plug
J242	1	1	1	YP10001130	Plug
J243	1	1	1	YP10001130	Plug
J244	1	1	1	YP10001130	Plug
J245	1	1	1	YP10001130	Plug
J246	1	1	1	YP10001130	Plug
J247	1	1	1	YP10001130	Plug
J248	1	1	1	YP10001130	Plug
J249	1	1	1	YP10001130	Plug
J251	1	1	1	YP10001130	Plug
J253	1	1	1	YP10001130	Plug
J254	1	1	1	YP10001130	Plug
J256	1	1	1	YP10001130	Plug
J258	1	1	1	YP10001130	Plug
J259	1	1	1	YP10001130	Plug
J260	1	1	1	YP10001130	Plug
J261	1	1	1	YP10001130	Plug
J262	1	1	1	YP10001130	Plug
J263	1	1	1	YP10001130	Plug
J265	1	1	1	YP10001130	Plug, Pin
J266	1	1	1	YP10001130	Plug, Pin
J267	1	1	1	YP10001130	Plug, Pin
J268	1	1	1	YP10001130	Plug, Pin
J269	1	1	1	YP10001130	Plug, Pin
J270	1	1	1	YP10001130	Plug, Pin

REF. DESIG.	Q'TY			PART NO.	DESCRIPTION
	U	C	E		
K200			1	FP21070510	
L201	1	1	1	LC11830010	Choke Coil, 18 μ H
L202	1	1	1	LI14019020	I.F.T., FM
P200	1	1	1	YK29921410	P.W. Board, Tuner
	1	1		ZZ29921410	P.W. Board Assembly
			1	ZZ29928410	P.W. Board Assembly
Q201	1	1	1	HT308291C0	Transistor, 2SC829 C
Q202	1	1	1	HD20001210	Diode, 1S2473
Q203	1	1	1	HD20001210	Diode, 1S2473
Q204	1	1	1	HT308291C0	Transistor, 2SC829 C
Q205	1	1	1	HD10003020	Diode, 20A90M
Q206	1	1	1	HD10003020	Diode, 20A90M
Q207	1	1	1	HD10003020	Diode, 20A90M
Q208	1	1	1	HD10003020	Diode, 20A90M
Q209	1	1	1	HV00006120	Varistor, MV-203
Q210	1	1	1	HT308291C0	Transistor, 2SC829C
Q211	1	1	1	HC10011060	I.C., UPC555H
Q212	1	1	1	HC10025010	I.C., HA11211
Q213	1	1	1	HT317401S0	Transistor, 2SC1740 S
Q214	1	1	1	HD20001210	Diode, 1S2473
Q215	1	1	1	HD20001210	Diode, 1S2473
Q216	1	1	1	HD20001210	Diode, 1S2473
Q217	1	1	1	HT317401S0	Transistor, 2SC1740 S
R201	1	1	1	RT05272140	Res., Fixed, 2.7k Ω $\pm$ 5%, $\frac{1}{4}$ W
R202	1	1	1	RT05153140	Res., Fixed, 15k Ω $\pm$ 5%, $\frac{1}{4}$ W
R203	1	1	1	RT05102140	Res., Fixed, 1k Ω $\pm$ 5%, $\frac{1}{4}$ W
R204	1	1	1	RT05102140	Res., Fixed, 1k Ω $\pm$ 5%, $\frac{1}{4}$ W
R205	1	1	1	RT05102140	Res., Fixed, 1k Ω $\pm$ 5%, $\frac{1}{4}$ W
R206	1	1	1	RT05331140	Res., Fixed, 330 Ω $\pm$ 5%, $\frac{1}{4}$ W
R207	1	1	1	RT05471140	Res., Fixed, 470 Ω $\pm$ 5%, $\frac{1}{4}$ W
R208	1	1	1	RT05101140	Res., Fixed, 100 Ω $\pm$ 5%, $\frac{1}{4}$ W
R209	1	1	1	RT05153140	Res., Fixed, 15k Ω $\pm$ 5%, $\frac{1}{4}$ W
R210	1	1	1	RT05472140	Res., Fixed, 4.7k Ω $\pm$ 5%, $\frac{1}{4}$ W
R211	1	1	1	RT05202140	Res., Fixed, 2k Ω $\pm$ 5%, $\frac{1}{4}$ W
R212	1	1	1	RT05102140	Res., Fixed, 1k Ω $\pm$ 5%, $\frac{1}{4}$ W
R213	1	1	1	RT05683140	Res., Fixed, 68k Ω $\pm$ 5%, $\frac{1}{4}$ W
R215	1	1	1	RT05224140	Res., Fixed, 220k Ω $\pm$ 5%, $\frac{1}{4}$ W
R217	1	1	1	RT05333140	Res., Fixed, 33k Ω $\pm$ 5%, $\frac{1}{4}$ W
R218	1	1	1	RT05333140	Res., Fixed, 33k Ω $\pm$ 5%, $\frac{1}{4}$ W
R219	1	1	1	RA05030120	Res., Semifixed, 50k Ω (B)
R220	1	1	1	RT05103140	Res., Fixed, 10k Ω $\pm$ 5%, $\frac{1}{4}$ W
R221	1	1	1	RT05273140	Res., Fixed, 27k Ω $\pm$ 5%, $\frac{1}{4}$ W
R222	1	1	1	RT05273140	Res., Fixed, 27k Ω $\pm$ 5%, $\frac{1}{4}$ W
R223	1	1	1	RT05104140	Res., Fixed, 100k Ω $\pm$ 5%, $\frac{1}{4}$ W
R224	1	1	1	RT05331140	Res., Fixed, 330 Ω $\pm$ 5%, $\frac{1}{4}$ W
R225	1	1	1	RT05470140	Res., Fixed, 47 Ω $\pm$ 5%, $\frac{1}{4}$ W
R226	1	1	1	RT05473140	Res., Fixed, 47k Ω $\pm$ 5%, $\frac{1}{4}$ W
R227	1	1	1	RA01030250	Res., Semifixed, 10k Ω (B)
R228	1	1	1	RT05102140	Res., Fixed, 1k Ω $\pm$ 5%, $\frac{1}{4}$ W
R229	1	1	1	RT05102140	Res., Fixed, 1k Ω $\pm$ 5%, $\frac{1}{4}$ W
R230	1	1	1	RT05470140	Res., Fixed, 47 Ω $\pm$ 5%, $\frac{1}{4}$ W
R231	1	1	1	RT05102140	Res., Fixed, 1k Ω $\pm$ 5%, $\frac{1}{4}$ W
R232	1	1	1	RT05331140	Res., Fixed, 330 Ω $\pm$ 5%, $\frac{1}{4}$ W
R233	1	1	1	RT05470140	Res., Fixed, 47 Ω $\pm$ 5%, $\frac{1}{4}$ W
R234	1	1	1	RT05473140	Res., Fixed, 47k Ω $\pm$ 5%, $\frac{1}{4}$ W
R235	1	1	1	RT05103140	Res., Fixed, 10k Ω $\pm$ 5%, $\frac{1}{4}$ W
R236	1	1	1	RT05181140	Res., Fixed, 180 Ω $\pm$ 5%, $\frac{1}{4}$ W
R237	1	1	1	RT05103140	Res., Fixed, 10k Ω $\pm$ 5%, $\frac{1}{4}$ W

U : For U.S.A.
C : For Canada
E : For Europe

REF. DESIG.	Q'TY			PART NO.	DESCRIPTION
	U	C	E		
R238	1	1	1	RT05103140	Res., Fixed, 10k Ω $\pm$ 5%, $\frac{1}{4}$ W
R239	1	1	1	RT05222140	Res., Fixed, 2.2k Ω $\pm$ 5%, $\frac{1}{4}$ W
R240	1	1	1	RT05470140	Res., Fixed, 47 Ω $\pm$ 5%, $\frac{1}{4}$ W
R241	1	1	1	RT05331140	Res., Fixed, 330 Ω $\pm$ 5%, $\frac{1}{4}$ W
R242	1	1	1	RT05683140	Res., Fixed, 68k Ω $\pm$ 5%, $\frac{1}{4}$ W
R243	1	1	1	RT05473140	Res., Fixed, 47k Ω $\pm$ 5%, $\frac{1}{4}$ W
R244	1	1	1	RA01030250	Res., Semifixed, 10k Ω (B)
R245	1	1	1	RT05224140	Res., Fixed, 220k Ω $\pm$ 5%, $\frac{1}{4}$ W
R246	1	1	1	RT05222140	Res., Fixed, 2.2k Ω $\pm$ 5%, $\frac{1}{4}$ W
R247	1	1	1	RT05564140	Res., Fixed, 560k Ω $\pm$ 5%, $\frac{1}{4}$ W
R248	1	1	1	RT05184140	Res., Fixed, 180k Ω $\pm$ 5%, $\frac{1}{4}$ W
R249	1	1	1	RT05104140	Res., Fixed, 100k Ω $\pm$ 5%, $\frac{1}{4}$ W
R250	1	1	1	RT05472140	Res., Fixed, 4.7k Ω $\pm$ 5%, $\frac{1}{4}$ W
R251	1	1	1	RA01040180	Res., Semifixed, 100k Ω (B)
R252	1	1	1	RT05123140	Res., Fixed, 12k Ω $\pm$ 5%, $\frac{1}{4}$ W
R253	1	1	1	RT05153140	Res., Fixed, 15k Ω $\pm$ 5%, $\frac{1}{4}$ W
R254	1	1	1	RT05104140	Res., Fixed, 100k Ω $\pm$ 5%, $\frac{1}{4}$ W
R255	1	1	1	RT05103140	Res., Fixed, 10k Ω $\pm$ 5%, $\frac{1}{4}$ W
S201	1	1	1	SP04030140	Pushswitch, Function
S201	1	1	1	SP06030130	Pushswitch, Function
C301	1	1	1	DF55471010	Cap., Film, 470pF
C302	1	1	1	DF17473010	Cap., Film, 0.047 μ F
C303	1	1	1	EA10601690	Cap., Elect., 10 μ F, 16V
C304	1	1	1	EQ22405010	Cap., Elect., 0.22 μ F, 50V
C305	1	1	1	EQ47405010	Cap., Elect., 0.47 μ F, 50V
C306	1	1	1	EQ22405010	Cap., Elect., 0.22 μ F, 50V
C307	1	1	1	DF15562050	Cap., Film, 0.0056 μ F
C308	1	1	1	DF15272050	Cap., Film, 0.0027 μ F
C308	1	1	1	DF15562050	Cap., Film, 0.0056 μ F
C309	1	1	1	DF15272050	Cap., Film, 0.0027 μ F
C309	1	1	1	DF15562050	Cap., Film, 0.0056 μ F
C310	1	1	1	DF15562050	Cap., Film, 0.0056 μ F
C311	1	1	1	EA10601690	Cap., Elect., 10 μ F, 16V
C312	1	1	1	EA10601690	Cap., Elect., 10 μ F, 16V
C313	1	1	1	EA10701690	Cap., Elect., 100 μ F, 16V
C314	1	1	1	EE47405010	Cap., Elect., 0.47 μ F, 50V
C315	1	1	1	DD16151010	Cap., Ceramic, 150pF
C316	1	1	1	EE47502510	Cap., Elect., 4.7 μ F, 25V
C318	1	1	1	EA22701690	Cap., Elect., 220 μ F, 16V
C319	1	1	1	EA22701690	Cap., Elect., 220 μ F, 16V
C320	1	1	1	EE47405010	Cap., Elect., 0.47 μ F, 50V
C321	1	1	1	DD16151010	Cap., Ceramic, 150pF
C322	1	1	1	EE47502510	Cap., Elect., 4.7 μ F, 25V
C324	1	1	1	EA22701690	Cap., Elect., 220 μ F, 16V
C325	1	1	1	EA10701690	Cap., Elect., 100 μ F, 16V
L301	1	1	1	LS35035010	M.P.X. Coil
Q301	1	1	1	HT317401S0	Transistor, 2SC1740 S
Q302	1	1	1	HC10009060	I.C., HA1156 W
Q303	1	1	1	HT317401S0	Transistor, 2SC1740 S
Q304	1	1	1	HT108422A0	Transistor, 2SA842 GR or BL
Q305	1	1	1	HT108422A0	Transistor, 2SA842 GR or BL
Q306	1	1	1	HT108422A0	Transistor, 2SA842 GR or BL
Q307	1	1	1	HT317400S0	Transistor, 2SC1740LN S
Q308	1	1	1	HT108422A0	Transistor, 2SA842 GR or BL
Q309	1	1	1	HT317400S0	Transistor, 2SC1740LN S
R301	1	1	1	RT05104140	Res., Fixed, 100k Ω $\pm$ 5%, $\frac{1}{4}$ W
R302	1	1	1	RT05332140	Res., Fixed, 3.3k Ω $\pm$ 5%, $\frac{1}{4}$ W
R303	1	1	1	RT05163140	Res., Fixed, 16k Ω $\pm$ 5%, $\frac{1}{4}$ W
R304	1	1	1	RA04720050	Res., Semifixed, 4.7k Ω (B)
R305	1	1	1	RT05683140	Res., Fixed, 68k Ω $\pm$ 5%, $\frac{1}{4}$ W

REF. DESIG.	Q'TY			PART NO.	DESCRIPTION
	U	C	E		
R306	1	1	1	RT05102140	Res., Fixed, 1k Ω $\pm$ 5%, $\frac{1}{4}$ W
R307	1	1	1	RT05102140	Res., Fixed, 1k Ω $\pm$ 5%, $\frac{1}{4}$ W
R308	1	1	1	RT05104140	Res., Fixed, 100k Ω $\pm$ 5%, $\frac{1}{4}$ W
R309	1	1	1	RT05104140	Res., Fixed, 100k Ω $\pm$ 5%, $\frac{1}{4}$ W
R310	1	1	1	RT05104140	Res., Fixed, 100k Ω $\pm$ 5%, $\frac{1}{4}$ W
R312	1	1	1	RT05202140	Res., Fixed, 2k Ω $\pm$ 5%, $\frac{1}{4}$ W
R313	1	1	1	RT05332140	Res., Fixed, 3.3k Ω $\pm$ 5%, $\frac{1}{4}$ W
R314	1	1	1	RT05512140	Res., Fixed, 5.1k Ω $\pm$ 5%, $\frac{1}{4}$ W
R315	1	1	1	RT05392140	Res., Fixed, 3.9k Ω $\pm$ 5%, $\frac{1}{4}$ W
R316	1	1	1	RT05392140	Res., Fixed, 3.9k Ω $\pm$ 5%, $\frac{1}{4}$ W
R317	1	1	1	RT05512140	Res., Fixed, 5.1k Ω $\pm$ 5%, $\frac{1}{4}$ W
R318	1	1	1	RT05202140	Res., Fixed, 2k Ω $\pm$ 5%, $\frac{1}{4}$ W
R319	1	1	1	RT05103140	Res., Fixed, 10k Ω $\pm$ 5%, $\frac{1}{4}$ W
R320	1	1	1	RT05332140	Res., Fixed, 3.3k Ω $\pm$ 5%, $\frac{1}{4}$ W
R321	1	1	1	RT05512140	Res., Fixed, 5.1k Ω $\pm$ 5%, $\frac{1}{4}$ W
R322	1	1	1	RT05512140	Res., Fixed, 5.1k Ω $\pm$ 5%, $\frac{1}{4}$ W
R323	1	1	1	RA01040180	Res., Semifixed, 100k Ω (B)
R324	1	1	1	RA01040180	Res., Semifixed, 100k Ω (B)
R326	1	1	1	RA01030250	Res., Semifixed, 10k Ω (B)
R327	1	1	1	RT05155140	Res., Fixed, 1.5M Ω $\pm$ 5%, $\frac{1}{4}$ W
R328	1	1	1	RT05104140	Res., Fixed, 100k Ω $\pm$ 5%, $\frac{1}{4}$ W
R329	1	1	1	RT05223140	Res., Fixed, 22k Ω $\pm$ 5%, $\frac{1}{4}$ W
R330	1	1	1	RT05471140	Res., Fixed, 470 Ω $\pm$ 5%, $\frac{1}{4}$ W
R331	1	1	1	RT05472140	Res., Fixed, 4.7k Ω $\pm$ 5%, $\frac{1}{4}$ W
R332	1	1	1	RT05272140	Res., Fixed, 2.7k Ω $\pm$ 5%, $\frac{1}{4}$ W
R333	1	1	1	RT05101140	Res., Fixed, 100 Ω $\pm$ 5%, $\frac{1}{4}$ W
R334	1	1	1	RT05104140	Res., Fixed, 100k Ω $\pm$ 5%, $\frac{1}{4}$ W
R335	1	1	1	RT05104140	Res., Fixed, 100k Ω $\pm$ 5%, $\frac{1}{4}$ W
R336	1	1	1	RT05104140	Res., Fixed, 100k Ω $\pm$ 5%, $\frac{1}{4}$ W
R337	1	1	1	RT05104140	Res., Fixed, 100k Ω $\pm$ 5%, $\frac{1}{4}$ W
R338	1	1	1	RT05101140	Res., Fixed, 100 Ω $\pm$ 5%, $\frac{1}{4}$ W
R339	1	1	1	RT05101140	Res., Fixed, 100 Ω $\pm$ 5%, $\frac{1}{4}$ W
R339	1	1	1	RT05101140	Res., Fixed, 100 Ω $\pm$ 5%, $\frac{1}{4}$ W
R340	1	1	1	RT05101140	Res., Fixed, 100 Ω $\pm$ 5%, $\frac{1}{4}$ W
R341	1	1	1	RT05101140	Res., Fixed, 100 Ω $\pm$ 5%, $\frac{1}{4}$ W
R342	1	1	1	RT05101140	Res., Fixed, 100 Ω $\pm$ 5%, $\frac{1}{4}$ W
R343	1	1	1	RT05471140	Res., Fixed, 470 Ω $\pm$ 5%, $\frac{1}{4}$ W
R344	1	1	1	RT05472140	Res., Fixed, 4.2k Ω $\pm$ 5%, $\frac{1}{4}$ W
R345	1	1	1	RT05272140	Res., Fixed, 2.7k Ω $\pm$ 5%, $\frac{1}{4}$ W
R346	1	1	1	RT05101140	Res., Fixed, 100 Ω $\pm$ 5%, $\frac{1}{4}$ W
R347	1	1	1	RT05223140	Res., Fixed, 22k Ω $\pm$ 5%, $\frac{1}{4}$ W
R348	1	1	1	RT05155140	Res., Fixed, 1.5M Ω $\pm$ 5%, $\frac{1}{4}$ W
R349	1	1	1	RT05104140	Res., Fixed, 100k Ω $\pm$ 5%, $\frac{1}{4}$ W
R350	1	1	1	RA01030250	Res., Semifixed, 10k Ω (B)
R351	1	1	1	RT05101140	Res., Fixed, 100 Ω $\pm$ 5%, $\frac{1}{4}$ W
R352	1	1	1	RT05101140	Res., Fixed, 100 Ω $\pm$ 5%, $\frac{1}{4}$ W
R353	1	1	1	RT05104140	Res., Fixed, 100k Ω $\pm$ 5%, $\frac{1}{4}$ W
R354	1	1	1	RT05101140	Res., Fixed, 100 Ω $\pm$ 5%, $\frac{1}{4}$ W
R354	1	1	1	RT05101140	Res., Fixed, 100 Ω $\pm$ 5%, $\frac{1}{4}$ W
R355	1	1	1	RT05103140	Res., Fixed, 10k Ω $\pm$ 5%, $\frac{1}{4}$ W
R356	1	1	1	RT05103140	Res., Fixed, 10k Ω $\pm$ 5%, $\frac{1}{4}$ W
C801	1	1	1	DK18103510	Cap., Ceramic, 0.01 μ F
C802	1	1	1	EA22701690	Cap., Elect., 22 μ F, 16V
C803	1	1	1	EA22701690	Cap., Elect., 22 μ F, 16V
C804	1	1	1	EA22703590	Cap., Elect., 22 μ F, 35V
C805	1	1	1	EA22703590	Cap., Elect., 22 μ F, 35V
C806	1	1	1	EA22701690	Cap., Elect., 22 μ F, 16V
C807	1	1	1	DK18103510	Cap., Ceramic, 0.01 μ F
C808	1	1	1	EA22703590	Cap., Elect., 22 μ F, 35V
C809	1	1	1	EA22703590	Cap., Elect., 22 μ F, 35V

U : For U.S.A.
C : For Canada
E : For Europe

REF. DESIG.	Q'TY			PART NO.	DESCRIPTION
	U	C	E		
C810	1	1	1	DK18103510	Cap., Ceramic, 0.01 μ F
C811	1	1	1	EA10701690	Cap., Elect., 100 μ F, 16V
C812	1	1	1	EA10601690	Cap., Elect., 10 μ F, 16V
F801			1	FS10315800	Fuse, 250V 3.15A (SEMKO)
F802			1	FS10050800	Fuse, 250V 500mA (SEMKO)
F803			1	FS10050800	Fuse, 250V 500mA (SEMKO)
J801			1	YJ08000200	Jack, Fuse Holder
J802			1	YJ08000200	Jack, Fuse Holder
J803			1	YJ08000200	Jack, Fuse Holder
J804			1	YJ08000200	Jack, Fuse Holder
J805			1	YJ08000200	Jack, Fuse Holder
J806			1	YJ08000200	Jack, Fuse Holder
Q801	1	1	1	HT403131E0	Transistor, 2SD313 E
Q802	1	1	1	HT317401S0	Transistor, 2SC1740 S
Q803	1	1	1	HT107771Q0	Transistor, 2SA777 Q
Q804	1	1	1	HD30021090	Zener, BZ-140
Q805	1	1	1	HD20005010	Diode, W06B
Q806	1	1	1	HD20011030	Diode, DS131-B
Q807	1	1	1	HD20012030	Diode, DS132-B
R801	1	1	1	RT05100140	Res., Fixed, 10 Ω $\pm$ 5%, $\frac{1}{4}$ W
R802	1	1	1	RT05333140	Res., Fixed, 33k Ω $\pm$ 5%, $\frac{1}{4}$ W
R803	1	1	1	RA05020200	Res., Semifixed, 5k Ω
R804	1	1	1	RT05221140	Res., Fixed, 220 Ω $\pm$ 5%, $\frac{1}{4}$ W
R805	1	1	1	RT05122140	Res., Fixed, 1.2k Ω $\pm$ 5%, $\frac{1}{4}$ W
R806	1	1	1	GJ05220020	Res., Fixed, 22 Ω $\pm$ 5%, 2W
R807	1	1	1	RT05182140	Res., Fixed, 1.8k Ω $\pm$ 5%, $\frac{1}{4}$ W
R808	1	1	1	GJ05221010	Res., Fixed, 220 Ω $\pm$ 5%, 1W
R809	1	1	1	RT05100140	Res., Fixed, 10 Ω $\pm$ 5%, $\frac{1}{4}$ W
R810	1	1	1	GU05681120	Res., Fixed, 680 Ω $\pm$ 5%, $\frac{1}{4}$ W
R811	1	1	1	RT05333140	Res., Fixed, 33k Ω $\pm$ 5%, $\frac{1}{4}$ W

11. TECHNICAL SPECIFICATIONS

FM Tuner Section:

Sensitivity

IHF Usable	10.3 dBf (1.8 μ V)
IHF 50 dB Quieting (Mono)	13.2 dBf (2.5 μ V)
(Stereo)	36.1 dBf (35 μ V)

Quieting Slope (Mono)

RF Input for 30 dB Quieting	8.2 dBf (1.4 μ V)
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Quieting at:

20 dBf (5.5 μ V)	58 dB
25 dBf (10 μ V)	63 dB
40 dBf (55 μ V)	72 dB
65 dBf (1000 μ V)	80 dB

Quieting Slope (Stereo)

Quieting at:

30 dBf (17 μ V)	43 dB
40 dBf (55 μ V)	55 dB
50 dBf (173 μ V)	60 dB
65 dBf (1000 μ V)	70 dB

Distortion (Mono) at 65 dBf (1000 μ V)

100 Hz	NARROW: 0.15%, WIDE: 0.1%
1000 Hz	NARROW: 0.15%, WIDE: 0.1%
6000 Hz	NARROW: 0.2%, WIDE: 0.1%

Distortion (Stereo) at 65 dBf (1000 μ V)

100 Hz	NARROW: 0.4%, WIDE: 0.25%
1000 Hz	NARROW: 0.2%, WIDE: 0.15%
6000 Hz	NARROW: 0.4%, WIDE: 0.3%

Distortion (Mono and Stereo)

at 50 dB Quieting, 1000 Hz	0.6%
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Hum and Noise

at 65 dBf (1000 μ V)

Mono	75 dB
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Frequency Response

30 Hz to 15 kHz

Mono	+0.2, -1.0 dB
Stereo	+0.2, -1.0 dB

Capture Ratio

at 45 dBf (100 μ V)	NARROW: 1.4 dB, WIDE: 1.0 dB
at 65 dBf (1000 μ V)	NARROW: 1.4 dB, WIDE: 1.0 dB

Alternate Channel Selectivity

NARROW: 80 dB, WIDE: 50 dB

Spurious Response Rejection

100 dB

Image Response Rejection

90 dB

I.F. Rejection (Balanced)

90 dB

A.M. Suppression

55 dB

Stereo Separation

100 Hz	42 dB
1000 Hz	50 dB
10 kHz	42 dB

Subcarrier Rejection

70 dB

AM Tuner Section:

IHF Usable Sensitivity	12 μ V
Distortion (THD), 30% Modulation	0.4%

Signal-to-Noise Ratio 52 dB
Frequency Response (± 3 dB) 40 Hz to 2.5 kHz
Alternate Channel Selectivity 46 dB
Image Rejection 45 dB
Spurious Response Rejection 60 dB
I.F. Rejection 40 dB

General:

Power Requirements 120 V AC, 60 Hz (for U.S.A. and Canada)
110/120/220/240 V AC, 50 Hz (for Europe)

Power Consumption 26 W

Dimensions:

Panel Width 416 mm (16-3/8 inches)

Panel Height 146 mm (5-3/4 inches)

Depth 239 mm (9-3/8 inches)

Weight:

Unit alone 6.5 kg (14.3 lbs)

Packed for shipment 8 kg (17.6 lbs)



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